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COMMONWEALTH OF PENNSYLVANIA

Water Supply Commission of Pennsylvania

WATER RESOURCES INVENTORY REPORT

Part VI

WATER SUPPLY

Act of July 25, 1913

HARRISBURG, PENNA.:
J. L. L. KUHN, PRINTER TO THE COMMONWEALTH
1920.

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PENNSYLVANIA

WATER SUPPLY COMMISSION OF PENNSYLVANIA

CHAIRMAN

*JOHN BIRKINBINE, Cynwyd, Montgomery County
(Died May 14, 1915)

VICE CHAIRMAN

**BENJAMIN K. FOCHT, Lewisburg, Union County
(Resigned February 28, 1915)

SECRETARY

THOMAS J. LYNCH, South Bethlehem, Northampton County

COMMISSIONER OF FORESTRY

ROBERT S. CONKLIN, Columbia, Lancaster County

COMMISSIONER OF HEALTH

DR. SAMUEL G. DIXON, Ardmore, Montgomery County

---

*ROBERT A. ZENTMYER, Tyrone, Blair County
(Appointed August 23, 1915, vice John Birkinbine, deceased)

**OLIVER S. KELSEY, Flemington, Clinton County
(Appointed December 1, 1915, vice Benjamin K. Focht, resigned)

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LETTER OF TRANSMITTAL

Office of the Water Supply Commission,
Harrisburg, January 1, 1918.

His Excellency, the Governor of the Commonwealth of Pennsylvania:

The Members of the Senate and the House of Representatives of the Commonwealth of Pennsylvania:

Gentlemen:—The Water Supply Commission of Pennsylvania respectfully submits herewith Part VI of the Water Resources Inventory Report, entitled "Water Supply," which contains detailed descriptions of each public system, tabulations of the industrial water supplies of manufacturing, mining and transportation corporations and a general discussion of the water supply situation, together with certain conclusions and recommendations in reference thereto.

THE WATER SUPPLY COMMISSION OF PENNSYLVANIA,

THOMAS J. LYNCH,
Secretary.

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West Reynoldsville,	17	995
West Telford,	3	288
Westview,	20	1285
West Waynesburg,	19	1226
Westwood,	19	1161
West Wyoming,	5	441
West York,	12	830
Whitaker,	19	1161
White Deer Township,	8	586
White Haven,	2	162
White Haven Sanitarium,	2	163
White Hill,	12	797
Whitemarsh,	3	257
*Whitney,	18	1122
Wickboro,	17	989
Wisconisco,	9	624
Wilburton,	5	378
*Wilcox,	17	960
*Wilken,	18	1034
Wilkes-Barre,	5	441
Wilkes-Barre Township,	5	441
Wilkinsburg,	18	1123
William Penn,	5	394
Williamsburg,	10	688
Williamsport,	8	592
Williamstown,	9	643
Willow Grove,	3	257
Wilmerding,	18	1123
Wilmont,	3	258
*Wilmore,	18	1029
Wilson,	19	1183
Winburne,	6	522
Windber,	18	1105
Wind Gap,	2	139
Windsor,	12	750
Winton,	5	429
Wireton,	19	1202

Name.	Section.	Page.
Womelsdorf,	3	295
Woodlawn,	20	1311
Woodlyn,	3	258
Woodvale,	10	684
Woodward,	9	644
Woodward Township,	6	508
Wormleysburg,	12	797
Wrightsville,	12	829
Wyalusing,	4	351
Wyncote,	3	256
Wyndmoor,	3	257
Wynn,	19	1165
Wynnewood,	3	257
Wyoming,	5	441
Yardley,	2	164
*Yatesboro,	17	1010
Yatesville (Luzerne Co.),	5	441
Yeadon,	3	258
Yeagertown,	11	701
Yoe,	12	750
York,	12	830
York Run,	19	1165
Yorktown,	5	398
Youngstown,	19	1165
Youngwood,	19	1185
Zelienople,	20	1312

PART VI

WATER SUPPLY

(The data herein contained were collected during the year 1914, and the conditions described were those then existing.)

DISCUSSION OF DOMESTIC AND INDUSTRIAL WATER SUPPLIES

INTRODUCTION

This report contains a description of each public water supply system in the State, as well as lists of, and data concerning, many industrial concerns which use water from privately owned and operated works. The descriptions and tables are arranged according to sub-drainage basins into 20 sections, each having an introduction covering the topographic, geologic and hydrographic features peculiar to that district and a summary table of condensed data. Statistics, conclusions and recommendations precede the detailed descriptions, and an appendix lists the incorporated water companies and consolidations.

From 1907 to 1909 the Commission made systematic field examinations of the water supply plants of the State, and the facts thus ascertained were incorporated into county reports which contained descriptions of all public and of many private waterworks. County maps were prepared on a scale of one mile to the inch, upon which were plotted the sources of each water supply system. The charters for water companies were also investigated and their disposition and status ascertained.

The 1909 Report of the Water Supply Commission contains a general discussion of water supply conditions then existing, but the detailed descriptions of the various systems were not published. Five years have not materially changed the general situation, although works have been altered and enlarged, some new companies formed and new plants built; hence portions of the 1909 Report discussion, with necessary modifications, are reproduced here. The descriptions

and maps mentioned above form the basis of the Inventory Report, and without them so complete a compilation could not have been prepared in so short a time. During the past year these data have been brought to date and additional features, such as the extent of distributing mains, hydrants and meters, cost of municipal works and the consumption of water by manufacturing, mining and railroad companies, added.

Acknowledgment is made to many industrial concerns for complete data furnished, and to the Department of Health and other State departments for access to their files. The final information was obtained by mail canvass, the description of each waterworks system being sent to the owners with a request that it be examined and corrected. Replies were generally prompt; but some small towns made no response to repeated inquiries, and descriptions of these are based on the earlier examinations, supplemented as previously described, or by field examination.

HISTORICAL

Probably the first waterworks system operated in Pennsylvania was that built by a Mr. Schaeffer about 1732 to supply Schaefferstown, Lebanon County, now an incorporated village, having a population of about 1,000. The works are now owned by the Schaefferstown Water Company, incorporated by special act of the Legislature in 1845. The system was willed to the citizens, each property owner on the main street to be a stockholder, and as such to pay annually 10 cents for each member of the family; others, not stockholders, to pay 20 cents per head per annum. There are no dividends, operation and maintenance being provided for from the funds collected. The water from a nearby spring is piped into large troughs on the main street.

The first waterworks pumping plant in Pennsylvania was at Bethlehem, Northampton County, constructed in 1754 by Hans Christopher Christiansen, water from a spring rising near Monocacy Creek being pumped by water power into a wooden distributing tank. The pump was of lignum-vitae, with a 5-inch cylinder. The first steam pumping plant in Pennsylvania was installed in Philadelphia in 1801, water being forced from the Schuylkill River at the foot of Chestnut Street to the site of the present City Hall, where a secondary pumping station and elevated tanks effected the distribution. The earliest water company incorporated in Pennsylvania was the "Water Pipes of Aaronsburg," by special act of the Legislature, March 25, 1809, for supplying Aaronsburg village, Centre County. The second and oldest incorporated water company now in operation is the York Water Company, chartered February 8, 1816, for supplying the city of York.

The following gives in chronological order the dates of construction of waterworks built previous to 1825:

TABLE NO. 1

Date of Construction of Early Waterworks

Place	City, borough or village	County	Date of construction
Schaefferstown,	Village,	Lebanon,	About 1732
Bethlehem,	Borough,	Northampton,	1754
Philadelphia,	City,	Philadelphia,	1801
Beaver,	Borough,	Beaver,	1808
Aaronsburg,	Village,	Centre,	About 1809
Rebersburg,	Village,	Centre,	1809
York,	City,	York,	1816
Easton,	City,	Northampton,	1817
Chambersburg,	Borough,	Franklin,	1818
Reading,	City,	Berks,	1819
Henrysburg,	Village,	Centre,	1819
Columbia,	Borough,	Columbia,	1824

Dates of installation of waterworks in municipalities having more than 30,000 inhabitants are shown in Table No. 2.

TABLE NO. 2

Date of Construction of Waterworks of Municipalities Having More Than 30,000 Inhabitants, Listed According to Population

Place	City or borough	County	Date of construction
Philadelphia,	City,	Philadelphia,	1801
Pittsburgh,	City,	Allegheny,	1828
Scranton,	City,	Lackawanna,	1858
Reading,	City,	Berks,	1819
Wilkes-Barre,	City,	Luzerne,	1859
Erie,	City,	Erie,	1860
Harrisburg,	City,	Dauphin,	1833
Johnstown,	City,	Cambria,	1863
Altoona,	City,	Blair,	1859
Allentown,	City,	Lehigh,	1827
Lancaster,	City,	Lancaster,	1836
York,	City,	York,	1816
McKeesport,	City,	Allegheny,	1882
Chester,	City,	Delaware,	1867
New Castle,	City,	Lawrence,	1881
Williamsport,	City,	Lycoming,	1856
Easton,	City,	Northampton,	1817
Norristown,	Borough,	Montgomery,	1847
Shenandoah,	Borough,	Schuylkill,	1870

Table No. 3 classifies the municipal and incorporated water supply systems according to the dates when a fairly complete system of water supply was first installed.

TABLE NO. 3

Classification by Dates of Construction of Waterworks

Year	Water supply systems constructed		Total	Total water companies incorporated
	Municipal	Incorporated		
Previous to 1850,	11	12	23	40
1850-1860,	3	11	14	40
1860-1870,	8	18	26	46
1870-1880,	17	25	42	49
1880-1890,	12	91	103	293
1890-1900,	55	140	195	467
1900-1910,	27	158	185	816
Total,	133	455	588	a 1,751

(a) Includes 84 water power companies; also many water companies chartered and not operating, and those merged or consolidated into single systems.

EXTENT OF WATER SUPPLY

There are now 614 water supply systems in the State under corporate or municipal ownership, of which 450 are corporate, 163 municipal and one jointly owned.* There is also record of 104 systems owned by mutual companies, partnerships or individuals, and 143 industrial water plants incidentally supplying employes' houses, making 861 systems of record of all classes. The record of the last class particularly is not complete, as it has not been practicable to direct inquiry to any but the larger industrial plants. About 30 privately owned systems supplying sanatoria, county or State institutions, etc., are described. The population supplied by individual systems varies from over 1,600,000 in Philadelphia to less than 100 in some rural villages, while the aggregate population supplied by waterworks is approximately 6,000,000, or 70% of that in the State, including all the 35 cities, 641 of 926 boroughs, and many unincorporated settlements. Every place of over 2,500 population, and most of those between 1,500 and 2,500, have waterworks. Most towns of over 1,000 population are provided with public water supplies, but in some instances contiguous communities, whose combined population seems large enough to warrant it, have not been so provided.

Many smaller boroughs and villages have waterworks, due to progressiveness and expected growth, or to an unusually favorable location of a source of water. The smallest borough with a public water

*Some systems serve more than one municipality.

system has about 200 population, and is served by municipal works, while the smallest unincorporated village system recorded is owned by an incorporated water company having only 15 consumers. The unincorporated systems seldom attempt to furnish water to all the community, they having been created for some industry or individual supplying others from a plant installed primarily for special use.

Table No. 4 indicates the prevalence of waterworks in Pennsylvania municipalities according to various ranges of population.

TABLE NO. 4

Prevalence of Waterworks in Pennsylvania Municipalities

Population 1915	Number of municipalities of given population having a public supply	Number under municipal ownership	Number under corporate ownership	Number not being supplied	Approximate population of municipalities served with water	Approximate total population of all municipalities
Under 1,000,	172	38	114	266	110,100	212,800
1,000 to 2,500,	220	57	160	19	381,700	411,500
2,500 to 10,000,	209	41	167	1	1,067,000	1,071,000
10,000 to 50,000,	63	19	44	0	1,154,400	1,154,400
Above 50,000,	12	8	4	0	3,020,300	3,020,300
Total,	a676	b†163	c†149	d286	e5,733,500	5,870,000

(a) Includes 24 supplied by plants owned by mutual companies, partnerships or individuals
(b) Includes one first class township
(c) Includes one town
(d) Includes one second class borough
(e) Population actually supplied, 5,480,000
(†) Where municipalities are served by two systems, tabulation has been made under the predominating system.

Approximately 500,000 people in more than 700 small settlements, not included in Table No. 4, are served by water supply systems, more than half being in suburban districts, adjacent to greater boroughs or cities and supplied by the same systems. The remaining population is scattered among isolated communities with local systems, of which about half are owned by incorporated companies, the rest being private industrial or domestic systems in the approximate proportions of three-fourths and one-fourth respectively. The extent and character of waterworks in each sub-basin are shown in Table No. 15. A complete list of water companies formed, their present status, and consolidations by merger or purchase, is given in the Appendix.

OWNERSHIP

Pennsylvania stands relatively low compared with other States in municipal ownership of waterworks, only 26.5% of 614 municipal and corporate plants being so owned, although it leads in total num-

ber of systems. In Kansas, Massachusetts, New York and Ohio, as shown in Table No. 5, the number of municipal plants in 1909 was far in excess of corporate ones, while only Connecticut and Rhode Island are as low in this respect as Pennsylvania. In the aggregate of all States listed, municipal plants predominate. The distribution and ownership of waterworks systems in this State is shown by sub-basins in Table No. 15.

TABLE NO. 5

Municipal and Corporate Ownership of Waterworks in Various States in 1909

State	Municipal plants		Corporate plants		Total number of plants
	Number	Per cent	Number	Per cent	
California,	34	47	38	53	72
Connecticut,	16	21	60	79	76
Kansas,	131	86	22	14	153
Massachusetts,	147	77	45	23	192
Michigan,	*100	54	*20	11	*184
New Hampshire,	50	49	52	51	102
New Jersey,	58	35	108	65	166
New York,	289	70	124	30	413
North Carolina,	†36	55	†15	23	†65
Ohio,	168	78	47	22	215
Oregon,	3	----------	Not known	----------	Not known
PENNSYLVANIA,**	133	23	455	77	588
Rhode Island,	4	21	15	79	19
South Carolina,	17	53	15	47	32
Vermont,	17	----------	Not known	----------	Not known
Wisconsin,x	----------	----------	----------	----------	----------
Total,	1,206	----------	1,016	----------	2,277

(*) Sixty-four other plants in doubt, but believed to be owned by municipality.
(†) Fourteen other plants in doubt.
(**) Pennsylvania has in 1915, 163 municipal and 450 corporate plants and one jointly owned.
(x) About 50% by each.

In larger cities municipally owned waterworks are more common and the tendency appears to be, as cities grow, to acquire water systems. Of the 676 municipalities receiving public water supplies, 149, or 22%, are served by municipal works; 479, or 71%, by incorporated companies; 24, or 3.5%, by mutual companies, partnerships or individuals, and 24, or 3.5%, by some combination of the above methods.

These figures show that in number the incorporated systems predominate; however, municipally owned systems supply about 60% of the total water furnished by public supplies, due to the large consumption in Philadelphia and Pittsburgh.

Table No. 6 shows that the control of water supplies, in 35 cities of the Commonwealth, is almost equally divided between municipal and corporate. There are 13 supplied entirely by municipal; and 4 are supplied by combined systems, the municipal predominating. Of

the remaining 18 cities, 17 are supplied entirely by corporate systems and the other by a combined system, with the corporate predominating.

TABLE NO. 6

Ownership of Water Supplies in Pennsylvania Cities

City	1915 population, U. S. census	Principal supply system	Other systems in community
Philadelphia,	1,383,664	Municipal,	Philadelphia and Bristol Water Co., Springfield Consolidated Water Co. and Overbrook Steam Heat Co.
Pittsburgh,	571,984	Municipal,	Pennsylvania Water Co., S. Pittsburgh Water Co. and Monongahela Water Co.
Scranton,	144,081	Scranton Gas & Water Co.,	Spring Brook Water Supply Co.
Reading,	105,094	Municipal,	None
Wilkes-Barre,	75,218	Spring Brook Water Supply Co.	None
Erie,	73,798	Municipal,	None
Harrisburg,	70,754	Municipal,	None
Johnstown,	66,585	Johnstown Water Co.,	Morrellville & Cambria Borough Water Co., Walnut Grove Water Co. and Moses Weaver (private)
Allentown,	61,901	Municipal,	None
Altoona,	57,606	Municipal,	Blair Gap Water Supply Co. (industrial), The Allegheny Water Co.
York,	50,543	York Water Co.,	None
Lancaster,	50,269	Municipal,	None
McKeesport,	46,743	Municipal,	Monongahela Valley Water Co.
Chester,	40,935	New Chester Water Co.,	None
New Castle,	40,351	City of New Castle Water Co.,	None
Williamsport,	33,495	Williamsport Water Co.,	None
Easton,	30,206	Lehigh Water Co. and S. Easton Water Co.	None
Hazleton,	28,001	Wyoming Valley Water Supply Co. and Diamond Water Co.	None
S. Bethlehem,	23,522	Bethlehem City Water Co.,	None
Pottsville,	22,028	Pottsville Water Co.,	None
Lebanon*,	20,089	Municipal,	Lebanon Water Co. (industrial)
Uniontown,	19,960	Uniontown Water Co.,	None
Oil City,	18,971	Municipal,	None
Carbondale,	18,887	Scranton Gas & Water Co.,	None
Pittston,	18,223	Spring Brook Water Supply Co.	None
Connellsville,	15,034	Connellsville Water Co.,	None
Bradford,	14,789	Municipal,	None
Dubois,	14,336	Municipal,	None
Meadville,	13,637	Municipal,	None
Beaver Falls,	13,316	Beaver Valley Water Co.,	None
Franklin*,	11,059	Municipal,	Hill Spring Water Co. (private)
Monongahela,	9,000	Monongahela City Water Co.,	None
Titusville,	8,684	Municipal,	None
Lock Haven,	8,000a	Municipal,	None
Corry,	7,000a	Corry Water Supply Co.,	None

(a) Estimated on basis of increase 1900-1910
(*) Considered entirely municipal

Incorporated systems in municipalities or portions thereof supply an aggregate population of 2,338,000, while 3,126,000 are supplied by municipally owned plants; but the number of communities served by water companies is greatly in excess of those supplied by municipal works. Municipal plants usually supply only one municipality, while a group of communities is often served through a single corporately owned plant. Cities and boroughs may, by law, own and operate

water supply systems, and the majority of works owned by municipalities were built originally by the public. Of the 163 municipally owned water supply systems, 129 were built by the municipalities, and the remainder purchased from incorporated companies or individuals. In but few instances have municipal works been built in competition with operating companies.

TABLE NO. 7

List of Municipalities Which Have Purchased Waterworks From Incorporated Water Companies and Other Concerns

Municipality	County	Date of purchase	Company selling
Allentown,	Lehigh,	1865	Allentown Water Co.
Altoona,	Blair,	1872	Altoona Gas & Water Co.
Ambridge,	Beaver,	1914	Harmony Water Co.
Aspinwall,	Allegheny,	- --	Land Company
Barnesboro,	Cambria,	1913	Northern Cambria Water Co.
Bradford,	McKean,	1882	Bradford Water Works Co.
Bristol,	Bucks,	1912	Bristol Water Co.
Brookville,	Jefferson,	1912	Brookville Water Co.
Dubois,	Clearfield,	1896	Dubois City Water Works Co.
Ephrata,	Lancaster,	1906	Ephrata Water Co.
Evansburg,	Butler,	1898	Evans City Water Co.
Ford City,	Armstrong,	1905	Pittsburgh Plate Glass Co.
Franklin,	Venango,	1908	Venango Water Co.
Greencastle,	Franklin,	1910	Greencastle Water Co.
Harrisburg,	Dauphin,	1847	Harrisburg Water Co.
Kennett Square,	Chester,	1850	Pure Spring Water Co. of Kennett Square
Laceyville,	Wyoming,	1905	Citizens Water Co. of Laceyville
Lancaster,	Lancaster,	----	Lancaster Borough Water Co.
Lititz,	Lancaster,	1906	Lititz Water Co.
Loganton,	Clinton,	1911	Loganton Water Co.
Malvern,	Chester,	1890	Malvern Water Co.
Martinsburg,	Blair,	1914	Martinsburg Water Co.
Meadville,	Crawford,	1898	Meadville Water Co.
New Florence,	Westmoreland,	1910	New Florence Water Co.
Oxford,	Chester,	1872	Oxford Gas & Water Co.
Reading,	Berks,	1865	Reading Water Co.
Slatington,	Lehigh,	1883	Slatington Water Co.
Slippery Rock,	Butler,	1903	Private parties
South Renovo,	Clinton,	1907	South Renovo Water Co.
Springdale,	Allegheny,	----	Springdale Water Co.
Steelton,	Dauphin,	1869	Steelton Home Water Co.
Strasburg,	Lancaster,	1898	Strasburg Water Co.
Troy,	Bradford,	1902	Troy Water Co. of Troy
Wampum,	Lawrence,	1914	

Two municipalities sold water systems to private parties. The works built by the Borough of St. Petersburg, Clarion County, in 1872, were operated by it until 1882, when letters patent were issued to the St. Petersburg Water Co., which now operates the original waterworks, the incorporators consisting of the borough councilmen and the stock being owned by the borough. In Chester, Delaware County, the first supply of water was furnished by the South Ward Water Works, built in 1867. This was a municipal supply, covering the South Ward, and the plant was purchased by the New Chester Water Co. in 1887. In two cases partial leases or financial agreements have been made by municipalities owning waterworks, with companies or in-

dividuals to assist in operation. Lancaster owns the waterworks, except the filtration plant which is owned and operated by the Lancaster Water Filtration Co., of Philadelphia, the City paying for water filtered. At Dawson, Fayette County, the waterworks originally installed by the Borough were, in 1902, leased for 10 years to an individual who operated it and paid 25% of the receipts to the Borough. On expiration of this lease the Borough resumed operation. At Cresson, Cambria County, and at Girardville, Schuylkill County, the municipality contracts with a water company for water from its mains, the Borough owning only the distributing pipe. The one case of combined ownership is at Carlisle, Cumberland County, where the plant was built by the Carlisle Gas and Water Co., the Borough subscribing for 50% of the stock.

A number of municipalities are supplied by both incorporated companies and municipal plants. In four instances water companies were established before the municipal works were built, while in others a municipality annexed territory in which a water company was operating. Under these conditions the municipality serves one section and the water company another, but at times the relations between the two are not harmonious, and the service is impaired thereby As shown in Table No. 8, the municipal supply predominates in nearly every case, and the water company operates in outlying sections or limited areas.

TABLE NO. 8

Municipalities Served With Water by Both Municipal and Corporate or Private Works

Municipality	Population	Water company or individual	Population served by company or individual	Population served by municipality
Altoona,	57,600	The Allegheny Water Co.,	500	55,500
Bethlehem,	13,900	Bethlehem City Water Co.,	4,500	8,000
Catasauqua,	5,900	Clear Springs Water Co.,	few	Nearly all
Center Hall,	500	Center Hall Water Co.,	25	475
Cresson,	1,800	Cresson Water Co.,	100	1,500
		Rebecca Water Co.,	20	
		Luther & O'Brien,	45	
Emaus,	4,100	Mountain Water Co.,	1,000	3,075
Franklin,	11,059	Hill Spring Water Co. (unine.),	100	*12,000
Gallitzin,	3,900	Gallitzin Water Co.,	3,000	750
Glen Rock,	1,400	Joseph Dice,	40	700
Hastings,	2,900	Hastings Water Co.,	500	1,900
Laceyville,	500	Three small private systems,	90	400
McKeesport,	46,700	Monongahela Valley Water Co.,	3,000	43,700
Philadelphia,	1,683,700	Phila. & Bristol Water Co.,	26,500	1,500,000
		Springfield Cons. Water Co.,	110,000	
		Overbrook Steam Heat Co.,	2,000	
Pittsburgh,	572,000	Pennsylvania Water Co.,	12,000	521,000
		S. Pittsburgh Water Co.,	39,000	
Saegertown,	725	Saegertown Inn,	150	100
Shenandoah,	28,600	Shenandoah Citizens Water Co.,	5,000	20,000
Shrewsbury,	600	E. F. Rehmeyer,	75	350

(*)Includes population outside city limits

The Act of July 9, 1901 (P. L. 627) gives townships of the first class, with a population of 300 per square mile or more, the right to build, own and operate waterworks as do cities and boroughs. One such plant is in operation in West Lebanon Township, Lebanon County, supplying a population of 550. Cities, boroughs and first and second class townships have the right to contract with water companies for fire protection.

COST OF MUNICIPAL WATER SYSTEMS

Data have been collected as to the cost of municipally owned waterworks and the gross revenue and annual operating expenses. Some of the costs are approximate, as often no complete record has been kept. The annual operating expense given was exclusive of fixed charges and an assumed figure, 6% of the total cost, was added for interest, depreciation, etc., to obtain a total cost of furnishing the water. This cost varies for the larger boroughs and cities from $50 to $80 per million gallons. In small places, with simple gravity systems, under most favorable conditions the cost is as low as $16; while for complex systems, figures between $200 and $400 are not infrequent, and in a few instances run higher. If the fixed charges were based on actual outstanding bonds the figures would, in many cases, be considerably less. The cost of the works per million gallons daily supplied varies from $100,000 or less to $350,000 for the larger boroughs and cities; and for smaller systems, using only small fractions of a million gallons daily, the rate ranges from $100,000 or less to $1,000,000, according to size and methods used.

INTERESTS CONTROLLING WATER COMPANIES

In many instances a number of systems are owned, controlled or operated under contract by one corporation or group of individuals representing closely identified interests. Table No. 9 shows these systems and the interests controlling or operating them. Only the name of the operating company is given, although often it controls several charters. This latter information may be found in the detailed descriptions of each system.

TABLE NO. 9

Interests Controlling a Number of Water Supply Systems

Interests owning, controlling or operating	Name of controlled operating company	Place or district served	County	Remarks
Ahrens, H. E., and others, 622 Court Street, Reading, Pa.	Hazelhurst Water Co.,	Hazelhurst village,	McKean,	Owns majority of stock
	Reading Suburban Water Co.,	Muhlenburg township,	Berks,	Owns majority of stock
	The West Conshohocken Water Co.	West Conshohocken borough,	Montgomery,	Owns majority of stock
	Wrightsville Water Supply Co.,	Wrightsville borough,	York,	Owns majority of stock
	Driftwood Water Co.,	Driftwood borough,	Cameron,	Owns part of stock
	Kutztown Water Co.,	Kutztown borough,	Berks,	Owns part of stock
	Lewistown-Reedsville Water Co.,	(Merger),	Mifflin,	Owns part of stock
	The Mohnsville Water Co.,	Mohnton borough,	Berks,	Represented by and records kept at H. E. Ahrens' office
	The Newville Water Co.,	Newville borough,	Cumberland,	Represented by and records kept at H. E. Ahrens' office
American Pipe Manufacturing Co.	Springfield Consolidated Water Co.(*)	Suburbs of Philadelphia,		Owns and operates
American Water Works and Electric Co.	The Butler Water Co.,	Butler borough,	Butler,	Owns or controls
	The Connellsville Water Co.,	Connellsville city,	Fayette,	Owns or controls
	City of New Castle Water Co.,	New Castle,	Lawrence,	Owns or controls
	Monongahela Valley Water Co.,	Glassport and vicinity,	Allegheny,	Owns or controls
	South Pittsburgh Water Co.,	Pittsburgh city (wards 18, 19 and 20), Bridgeville, Carnegie and vicinity	Allegheny,	Owns or controls
	The Warren Water Co.,	Warren borough,	Warren,	Owns or controls
Buffalo, Rochester and Pittsburgh Railway Co.	Cloe Water Co.,	Bell township,	Jefferson,	Controls
	Cummings Water Co.,	Rayne township,	Indiana,	Controls
	Ketner Water Co.,	Jones township,	Elk,	Controls
	Kyle Water Co.,	Washington township,	Jefferson,	Controls
Cambria Steel Co.,	Manufacturers Water Co.,	Cambria Steel Co., and other industries in Johnstown	Cambria,	Owns
	Johnstown Water Co.,	Part of Johnstown city,	Cambria,	Owns controlling stock
Clearfield Bituminous Coal Corp.,	Cambria County Water Supply Co., and 23 other active and inactive charters supplying 5 separate systems	Gallitzin borough, Nanty-Glo village, Wildwood village, Summerhill borough and Marstetter village	Cambria,	Property and charters of all but 4 companies controlled by the Pennsylvania Coal & Coke Corp., under lease from the Clearfield Bituminous Coal Corp.
Flory, Milton and others, Bangor, Pa.	Blue Mountain Consolidated Water Co.	Nazareth, Pen Argyl,	Northampton,	Connected with
	Bangor Water Co.,	Bangor,	Northampton,	Connected with

TABLE NO. 9—Continued

Interests owning, controlling or operating	Name of controlled operating company	Place or district served	County	Remarks
Frederick, H. G., and Bradenbaugh, T. F.	Curwensville Water Co.,	Curwensville borough,	Clearfield,	Connected with
	Everett Water Co.,	Everett borough,	Bedford,	Connected with
	Hughesville Water Co.,	Hughesville borough,	Lycoming,	Connected with
	Middleburg Water Co.,	Middleburg borough,	Snyder,	Connected with
	Millersburg Home Water Co.,	Millersburg borough,	Dauphin,	Connected with
	Parkesburg Water Co.,	Parkesburg borough,	Chester,	Connected with
Frick, H. C. Coke Co., Carnegie Building, Pittsburgh, Pa.	Franklin Township Water Co.,	Smock village,	Fayette,	Owned
	Mt. Pleasant Water Co.,	Mt. Pleasant borough,	Westmoreland,	Owned
	Sewickley Water Co.,	United and Calumet villages,	Westmoreland,	Owned
	Standard Water Co.,	Industrial supply to coke ovens, Unity township	Westmoreland,	Owned
	Trotter Water Co.,	Coke regions,	Fayette,	Owned
	Puritan Water Co.,	Baggaley,	Westmoreland,	Leased
Gring, David, and others, Commonwealth Building, Harrisburg, Pa.	Hanover & McSherrystown Water Co.	Hanover and McSherrystown boroughs	York and Adams,	Controlled by
	Lebanon Valley Consolidated Water Supply Co.	Jonestown, Avon, East Lebanon	Lebanon,	Controlled by
	Paxtang Consolidated Water Co.	Paxtang borough,	Dauphin,	Controlled by
	West End Water Co.,	West End village,	Lancaster,	Controlled by
	Mountain City Water Co.,	Frackville borough,	Schuylkill,	Controlled by
	Newport Home Water Co.,	Newport borough,	Perry,	Controlled by
	Washington Water Supply Co.,	Emerald and Slatedale,	Washington,	Controlled by
Lehigh Coal and Navigation Co.,	The Panther Valley Water Co.,	Lansford borough,	Carbon,	Interested in
	Milnesville Water Co.,			
Lehigh Valley Coal Co.,	Wyoming Valley Water Supply Co.	Hazleton,	Luzerne,	Interested in
Lewis, R. R., and others,	Lewisville Water Co.,	Lewisville,	Potter,	Are officers of
	Roulet Water Co.,	Roulet township,	Potter,	Are officers of
McWilliams, C. Q., and others, Shamokin, Pa.	Roaring Creek Water Co.,	Shamokin borough,	Northumberland,	Interested in
	Bear Gap Water Co.,	Mt. Carmel township,	Northumberland,	Interested in
National Water Works & Guarantee Co.	Latrobe Water Co.,	Latrobe borough,	Westmoreland,	Owns
	Armstrong Water Co.,	Kittanning borough,	Armstrong,	Are officers of
" (individuals connected therewith)	Huntingdon Water Supply Co.,	Huntingdon borough,	Huntingdon,	Are officers of

Pennsylvania Railroad Co.,	Octoraro Water Co.,	From Downingtown on main line, nearly to Columbia on low grade freight line		Control
	Dauphin Consolidated Water Co.,	Domestic, Enola and Dauphin. Industrial from Dauphin on Northern Central to Harrisburg and Enola		Control
	Nakoda Water Supply Co.,	Mouth of Juniata River to Millerstown		Control (not in operation)
	Clearview Water Supply Co.,	Milflin to Denholm,		Control
	Greenmount Water Supply Co.,	Lewistown to Huntingdon,		Control (not in operation)
	Trout Run Water Supply Co.,	Huntingdon to Tyrone,		Control (not in operation)
	Tipton Water Co.,	Tyrone to Altoona,		Control
	Blair Gap Water Supply Co.,	Altoona to Gallitzin Tunnel,		Control
	Summit Water Supply Co.,	Domestic supply to Lilly borough and Beaverdale village. Industrial supply from Gallitzin to Johnstown		Control
	Blue Ridge Water Supply Co.,	Johnstown to Latrobe,		Control
	Mountain Water Supply Co.,	From Connellsville through Greensburg to Pittsburgh and through Uniontown and Brownsville to McKeesport		Control
	Citizens Water Co. of Scottdale,	Scottdale, Bessemer, Buck Eye, Everson, Kifertown, McClure, Prittstown, Pushing and West Overton, domestic and industrial supply		Control
	Blandsburg Water Co.,	Domestic supply to Blandsburg village, Cambria county and railroad supply		Control
Pennsylvania Water Co., 701 Wood Street, Wilkinsburg, Pa.	Pennsylvania Water Co.,	Pittsburgh (12th, 13th & 14th wards), the borough of Wilkinsburg and numerous other boroughs and villages		Interested in
	Apollo Water Works Co.,	Apollo borough and adjacent territory		Interested in
	Leechburg Water Works Co.,	Leechburg borough and adjacent territory		Interested in
Philadelphia and Reading Coal and Iron Co.	The Anthracite Water Co.,	Gilberton borough and Yatesville village		Controlled by
	Silver Creek Water Co.,	New Philadelphia borough and Cumbola village		Controlled by
	The Crystal Water Co.,	Branchdale,	Schuylkill,	Controlled by
	North Manheim Water Co.,	Industrial supply to mines,	Schuylkill,	Controlled by
	Pine Hill Water Co.,	Landingville borough,	Schuylkill,	Controlled by
	Middleport Water Co.,	Middleport borough,	Schuylkill,	Controlled by
	Moss Glen Water Co.,	Patterson and Tuscarora villages	Schuylkill,	Controlled by
	Oak Grove Water Co.,	West Butler township,	Schuylkill,	Controlled by (not in operation)

TABLE NO. 9—Continued

Interests owning, controlling or operating	Name of controlled operating company	Place or district served	County	Remarks
Philadelphia and Reading Coal & Iron Co.	Good Spring Water Co.,	Porter township,	Schuylkill,	Controlled by (not in operation)
	Zerbe Run Water Co.,	Zerbe township,	Schuylkill,	Controlled by (not in operation)
	Rock Water Co.,	Tremont township,	Schuylkill,	Controlled by (not in operation)
	Glendower Water Co.,	Foster township,	Schuylkill,	Controlled by (not in operation)
	Frailey Water Co.,	Frailey township,	Schuylkill,	Controlled by (not in operation)
	Otto Water Co.,	Reilly township,	Schuylkill,	Controlled by (not in operation)
Quinn, M. P. and others, 612 Fidelity Building, Philadelphia, Pa.	Bethlehem City Water Co.,	South Bethlehem and vicinity,	Northampton and Lehigh	Controlled by
	Lancaster Water Filtration Co.,	Lancaster,	Lancaster,	Filters water for Lancaster municipal system
	Philadelphia & Bristol Water Co.	Philadelphia (35th and 41st wards)		Controls
	Allegheny Valley Water Co.,	Tarentum and vicinity,	Allegheny,	Controls (acting for bondholders)
Russell, J. B., and others, 24 South Franklin Street, Wilkes-Barre, Pa.	Lehighton Water Supply Co.,	Lehighton and Weissport,	Carbon,	Interested in
	Blossburg Water Co.,	Blossburg borough,	Tioga,	Interested in
Scranton, W. W., and others,	Scranton Gas and Water Co.(†)	Scranton and Lackawanna Valley		Controls
United Water and Guarantee Co., Harrisburg, Pa.	The Jersey Shore Water Co.,	Jersey Shore borough,	Lycoming,	Owns
	York County Cons. Water Co.,	Dallastown, Yoe, Windsor,	York,	Owns
	Halifax Water Co.,	Halifax borough,	Dauphin,	Control
	Glen Water Co.,	Glen Campbell borough,	Indiana,	Operates
	Arcadia Water Co.,	Arcadia village,	Indiana,	Operates
	The Lindsey Water Co.,	Greater Punxsutawney borough	Jefferson,	Operates
	Reynoldsville Water Co.,	Reynoldsville, Ohiotown and Prescottville	Jefferson,	Operates
Watres, L. A. and others, Scranton, Pa.	Spring Brook Water Supply Co.(†)	Wilkes-Barre and Wyoming Valley		Interested in
	Mansfield Water Co.,	Mansfield borough,	Tioga,	Interested in

(*)For list of subsidiary companies see description under "Philadelphia, Suburbs of," Section No. 3.
(†)For list of subsidiary companies see description under "Scranton" and "Wilkes-Barre," Section No. 5.

UNINCORPORATED WATER SUPPLY SYSTEMS

The unincorporated systems owned by partnerships, individuals or corporations other than water companies were examined to determine their condition and legal status. Certain classes of industrial corporations may deflect water from flowing streams for use in their works, but the law does not recognize their right to supply water for domestic consumption, and requires that water diverted be returned to the stream, in equal quantity and quality, within the limits of the property of the corporation. It is recognized, however, that a reasonable reduction in quantity and quality is difficult to avoid; also that many industrial companies supply employes' houses, and where such supply is essential no objections have been raised.

Furnishing water to the public by partnerships and individuals is not covered by statute, although such water pumped from wells may be permissible; that from flowing streams, however, is not within the law. An individual, though permitted to take water for his own use from a stream in or abutting on his property, may not sell it, and he cannot contract with a municipality for laying pipes and supplying water. Information as to such systems is difficult to obtain, because they are not officially recorded as are incorporated water companies. These unincorporated supplies are comparatively insignificant in relation to the percentage of population served and importance of sources of supply, hence are omitted from further discussion, but are shown in the tables in each section.

COMPARATIVE USE OF GROUND AND SURFACE WATER

Of the 614 municipal and incorporated water supply systems, 42% use flowing streams, lakes or ponds, 41% depend upon ground supplies (including about 4% for wells along river banks), and 17% use a combination of ground and surface water. It is not unusual to reinforce surface supplies by pumping from drilled wells, and such assistance has proved of much value during droughts. The larger municipalities are usually supplied from flowing streams, springs being as a rule too small. Table No. 10 indicates the source of supply of the municipal and incorporated water plants in the Commonwealth.

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TABLE NO. 10

Source of Supply of Municipal and Incorporated Waterworks

Source	Municipal	Water companies	Total
Surface Waters:			
Rivers,	15	39	54
Creeks and runs,	38	181	219
Lakes,	1	4	5
Lakes and streams,	0	2	2
Total, 1909,	54	226	280
Total, 1915,	--	--	259
Ground Waters:			
Springs,	24	90	114
Wells,	21	36	57
Springs and wells,	10	24	34
Total, 1909,	55	150	205
Total, 1915,	--	--	249
Combined Surface and Ground Waters:			
Dug or drilled wells in or along rivers,	9	8	17
Streams and springs,	10	34	44
Streams and wells,	3	21	24
Springs, streams and wells,	2	14	16
Well and lake,	0	1	1
Spring and lake,	0	1	1
Total, 1909,	24	79	103
Total, 1915,	--	--	106
Grand total, 1909,	133	455	588
Grand total, 1915,	--	--	614

Large rivers afford, in general, ample supplies, and the communities so served seldom lack sufficient water even during extreme droughts. One notable exception is the Shenango River, whose dry weather flow fails to meet the requirements of the many industries which use it, and to remedy this the Pymatuning Reservoir Project is now under development by this Commission.

River supplies generally require purification to fit them for domestic use. Of 24 systems using water from the Delaware, Schuylkill, Lehigh and Susquehanna rivers, two use filter cribs and 20 purify by one of the recognized filtration processes; while of 34 taking from the Ohio, Monongahela, Youghiogheny, Cheat, Allegheny, Kiskiminitas, Conemaugh, Beaver and Shenango rivers, 20 use a recognized filtration process and six have filter cribs. Thus but 10 of 58 systems receive raw water from the large rivers. There are, besides, numerous wells driven along river banks which draw in part indirectly by infiltration from the rivers and in part probably from underground sources, as discussed later and shown in Table No. 12. The demands of future growth and use may in some cases require regulation of flow by storage reservoirs.

The western rivers are much more used than those in the east, both by municipalities for public purposes and by industries, though

their quality is more impaired by waste and the quantity available per square mile of drainage area at times of drought is generally less.

Omitting numerous small boroughs and villages, secondary streams and small creeks are the most frequently used sources of supply, and are often supplemented with springs and wells. Such supplies, however, often prove inadequate during drought, if ample impounding reservoirs are not provided.

Natural lakes and ponds are little used for supply. In the northeastern part of the State are many lakes which would afford ample water of good quality, but the meager population adjacent does not require their use, and the necessity of conveying the water to the more populous districts has not yet developed. However, several lakes are used by private waterworks during the summer months to supply hotels, boarding houses and cottages. Some natural lakes at or near the source of streams used for supply have been dammed at the outlet to obtain storage or to form ice ponds. (See Water Resources Inventory Report, Part IV.)

GROUND WATER SUPPLIES.

As shown, slightly more of the municipal and incorporated systems are supplied from flowing streams than from springs and wells, while of the many small local private systems a large portion use the latter sources; and in general those systems using underground sources are smaller than the others. Spring supplies are widely scattered over the State, but are often used in conjunction with other sources. Spring waters, though desirable, require care and protection, and as such supplies are among those most diminished by droughts, experience has led to their reinforcement in many instances. Smaller communities can often obtain adequate supplies from springs, but with increase of demand these prove insufficient.

The largest municipalities supplied by springs are Allentown, population 62,000; Slatington, 4,800; Bellefonte, 4,150, and Towanda, 4,100. No other municipalities of over 2,000 population obtain their entire supply from springs.

Drilled wells as sources of supply have been unsuccessful in some sections, but satisfactory in others, according to the amount and character of the ground water, the depth at which this is found, and the character of underlying strata. The air-lift method of forcing water from driven wells is common, as well as the older method of deep well pumps.

In the southeastern counties drilled wells are numerous, probably due to less availability of surface water because of its pollution and other causes resulting from dense population, extensive agriculture, and reduced forest cover. In the anthracite counties wells are numer-

ous on account of the large requirements for water by coal miners, and the dense population surrounding them, which has used practically all suitable available surface water. Below their extreme headwaters most of the streams are rendered unfit for use by coal waste, so that the surface supply is small where the demand is greatest; hence wells are widely used, being generally drilled outside of the coal measures.

There are many drilled wells in the oil, bituminous coal and gas producing counties. This is probably due not so much to lack of surface water or abundance of ground water as to familiarity with well drilling, for water is generally met in searching for oil and can usually be found at a known depth and in quantity. There seems, however, no reason to believe that the ground water supply is more abundant in these regions than in other parts of the State where drilled wells are fewer. In the western portion large wells have been dug or driven along the banks or in the beds of rivers or streams. Where the banks are of gravel or other pervious material water readily filters into these wells, but the more satisfactory the purification the greater the risk of the filtering material becoming clogged. Such works are listed in Sections Nos. 18 and No. 19, and particularly in Section No. 20, there being 25 in the State, all in the western part. Water so derived comes from the river or the bordering hills, usually from both. If seeped from the river the quality is usually superior to the raw water and is of large volume.

GRAVITY AND PUMPING SUPPLIES

Gravity supplies are usually the most economical to operate and maintain, and are installed, if suitable sources can be secured, at reasonable cost. Most small towns have gravity supplies, and were these not available many would be without public systems. Larger towns can afford the additional expense necessary for pumping. Of 614 municipal and corporate systems 237 are gravity supply, 219 pumping, and 158 combined gravity and pumping; while of the small private systems about three-fourths are gravity. This refers to the method of obtaining the water, not to its local distribution, for which pumping may sometimes be necessary. The use of gravity and pumping plants naturally varies with topographic and hydrographic conditions, the former prevailing in the more mountainous regions.

PURIFICATION

Filtration has been widely adopted for municipal water purification in Pennsylvania. It is relatively expensive, usually involving pumping, often a chemical coagulant and always one or more operators, as a result of which small communities can seldom afford it. Filtra-

tion is applied almost entirely to surface supplies, all but three of the 93 systems that employ filtration using surface sources. Communities equipped with filtration plants range from the largest cities, Philadelphia and Pittsburgh, to St. Benedict, Carbon County, population 1,250.

Both the mechanical and slow sand processes are used, the former being more frequently employed and often at less cost of installation but greater operating expense. The total population served with filtered water is 3,844,000, more than two-thirds of that supplied by waterworks, and about half that of the State. The total capacity of filters is 864,000,000 gallons per 24 hours, of which 614,300,000 gallons is comprised in seven slow sand filter plants, the installations at Philadelphia and Pittsburgh having a combined daily capacity of 582,000,000 gallons.

Table No. 11, compiled partly from data furnished through the courtesy of the Department of Health, shows the municipalities supplied with filtered water, the style of filters, ownership of waterworks, capacity of filters and reported average daily consumption, and shows that 20 of the 93 systems using filtration are municipally owned.

TABLE NO. 11

Filtered Supplies

Place	Population supplied	Ownership	Type	Daily capacity of plant (gallons)	Average daily consumption (gallons)
Apollo,	7,000	Apollo Water Works Co.,	Slow Sand—Harlow,	2,000,000	424,000
Beaver Valley, Eastvale,	34,775	Beaver Valley Water Co.,	Rapid Sand—Jewell,	5,000,000	----------
Beaver Valley, New Brighton,	----------	Beaver Valley Water Co.,	Rapid Sand—Pittsburgh Filter Mfg. Co.,	4,500,000	5,860,000
Bloomsburg,	7,000	Bloomsburg Water Co.,	Rapid Sand—Pittsburgh Filter Mfg. Co.,	1,500,000	1,250,000
Bristol,	9,700	Municipal,	Rapid Sand—Jewell,	2,000,000	1,320,000
Brookville,	3,600	Municipal,	Rapid Sand—American Water Softener Co.,	1,000,000	316,000
Butler,	20,000	Butler Water Co.,	Rapid Sand—American Water Works & Guar. Co.,	5,000,000	2,600,000
California,	1,500	California Water Co.,	Rapid Sand,	400,000	100,000
Cambridge Springs,	1,550	Municipal,	Rapid Sand—Pittsburgh Filter Mfg. Co.,	1,000,000	125,000
Canonsburg,	4,000	North Strabane Water Co.,	Rapid Sand—American Water Softener Co.,	1,250,000	800,000
Canton,	1,800	Citizens Water Co.,	Rapid Sand—N. Y. Continental Jewell,	250,000	400,000
Carlisle,	7,000	Carlisle Gas & Water Co.,	Rapid Sand—Morrison Jewell,	1,200,000	1,000,000
Charleroi & vicinity,	36,900	Tri-Cities Water Co.,	Rapid Sand—Chester & Fleming,	5,000,000	2,950,000
Chester & suburbs,	55,000	New Chester Water Co.,	Rapid Sand—Roberts & Hodkinson,	10,000,000	3,500,000
Clarion,	3,000	Clarion Water Co.,	Rapid Sand—N. Y. Continental Jewell,	750,000	312,000
Coatesville,	13,900	Municipal,	Pressure Rapid Sand—Am. Water Softener Co.,	1,000,000	1,500,000
Columbia,	12,000	Columbia Water Co.,	Rapid Sand—Pittsburgh Filter Mfg. Co.,	2,000,000	726,000
Connellsville,	16,800	Connellsville Water Co.,	Pressure Rapid Sand—N. Y. Continental Jewell,	1,750,000	1,675,000
Danville,	7,000	Municipal,	Rapid Sand—Jewell, remodeled by Chester & Fleming,	1,000,000	800,000
Danville State Hospital,	1,700	Commonwealth of Pennsylvania,	Rapid Sand—Jewell & Am. Water Softener Co.,	1,400,000	300,000
Eagles Mere (summer),	2,600	Eagles Mere Water Co.,	Rapid Sand—Roberts Filter Mfg. Co.,	500,000	67,000
East Greenville,	1,500	Municipal,	Rapid Sand—N. Y. Continental Jewell,	350,000	75,000
Elizabeth,	18,700	Monongahela Valley Water Co.,	Pressure Rapid Sand—N. Y. Cont. Jewell,	2,250,000	1,500,000
Ellwood City,	6,500	Ellwood Water Co.,	Rapid Sand—Chapin,	3,200,000	2,238,000
Enola,	1,600	Dauphin Consolidated Water Co.,	Rapid Sand—Roberts,	40,000	53,000
Erie,	80,000	Municipal,	Rapid Sand—Henry Shenk Co.,	20,000,000	16,807,000
Ernest,	1,800	Jefferson & Clearfield C. & I. Co.,	Rapid Sand—Pittsburgh Filter Mfg. Co.,	500,000	30,000
Falls Creek,	750	Municipal,	Slow Sand—Hess and Boughton,	500,000	50,000
Franklin,	12,000	Municipal,	Rapid Sand—Greer,	2,000,000	1,590,000
Freeport,	2,000	Freeport Water Works Co.,	Rapid Sand—Greer,	1,000,000	600,000
Gettysburg,	4,000	Gettysburg Water Co.,	Rapid Sand—N. Y. Continental Jewell,	1,000,000	410,000
Greenville,	7,500	Greenville Water Co.,	Rapid Sand,	1,500,000	700,000
Harrisburg,	70,750	Municipal,	Rapid Sand—James H. Fuertes,	15,000,000	10,000,000
Holmesburg,	26,500	Phila. & Bristol Water Co.,	Pressure Rapid Sand—N. Y. Cont. Jew. & Rbts.,	3,000,000	1,820,000
Hummelstown & vicinity,	10,550	Hummelstown Cons. Water Co.,	Rapid Sand—Pittsburgh Filter Mfg. Co.,	2,000,000	1,080,000
Huntingdon,	7,000	Huntingdon Water Supply Co.,	Semi-Rapid Sand—P. A. Maignen,	800,000	834,000
Indiana,	5,000	Clymer Water Co.,	Rapid Sand—Roberts Filter Mfg. Co.,	1,000,000	400,000

Iselin,	1,500	Pittsburgh Gas Coal Co.,	Rapid Sand—Pittsburgh Filter Mfg. Co.,	60,000	40,000
Jenkintown & vicinity,	5,000	Moreland Springs Water Co.,	Rapid Sand—Roberts Filter Mfg. Co.,	1,500,000	350,000
Jonestown, Lebanon & suburbs,	12,640	Lebanon Valley Cons. W. S. Co.,	Rapid Sand—C. E. Schaup,	2,000,000	1,595,000
Kittanning & Wickboro,	7,200	Armstrong Water Co.,	Semi-Rapid Sand—P. A. Maignen,	2,000,000	1,250,000
Lancaster & suburbs,	60,000	Municipal,	Semi-Rapid Sand—P. A. Maignen,	9,000,000	7,250,000
McKeesport,	44,000	Municipal,	Rapid Sand—Pittsburgh Filter Mfg. Co.,	6,000,000	6,000,000
Marianna,	1,500	Marianna Water Co.,	Rapid Sand—Pittsburgh Filter Mfg. Co.,	500,000	700,000
Masontown,	1,000	Municipal,	Rapid Sand—Chester and Fleming,	250,000	45,000
Mechanicsburg & suburbs,	4,000	Mechanicsburg Gas & Water Co.,	Rapid Sand—Pittsburgh Filter Mfg. Co.,	500,000	240,000
Media, Moylan & Wallingford,	5,312	Municipal,	Pressure Rapid Sand—Robert Wetherill,	1,000,000	515,000
Middletown & suburbs,	4,000	Middletown & Swatara Cons. W. Co.	Rapid Sand—C. E. Schaup,	1,000,000	600,000
Midland,	4,000	Midland Water Co.,	Rapid Sand,	864,000	370,000
Monongahela City & vicinity,	5,000	Monongahela City Water Co.,	Rapid Sand—W. B. Scaife & Sons,	2,000,000	400,000
Montgomery,	1,040	Montgomery Water Co.,	Rapid Sand—Roberts Filter Mfg. Co.,	570,000	130,000
Natrona,	7,000	Natrona Water Co.,	Rapid Sand—W. B. Scaife & Sons,	500,000	210,000
New Bethlehem & vicinity,	1,500	Citizens Water Co.,	Rapid Sand—N. Y. Cont. Jew. & Reisert,	300,000	180,000
New Castle,	38,760	City of New Castle Water Co.,	Rapid Sand—N. Y. Cont. Jew. & Am. W. & G. Co.,	8,000,000	3,600,000
New Cumberland & vicinity,	9,000	Riverton Cons. Water Co.,	Rapid Sand—Pittsburgh Filter Mfg. Co.,	1,500,000	300,000
New Kensington & vicinity,	13,700	Kensington Water Co.,	Rapid Sand—Pittsburgh Filter Mfg. Co.,	3,000,000	2,288,000
Newport & vicinity,	2,500	Newport Home Water Co.,	Rapid Sand—C. E. Schaup,	250,000	250,000
Norristown & Bridgeport,	33,250	Norristown Insurance & W. Co.,	Rapid Sand—N. Y. Continental Jewell,	4,000,000	2,500,000
Northeast,	3,000	Municipal,	Pressure Rapid Sand—Hungerford—Terry,	300,000	400,000
Parkers Landing & vicinity,	800	Parker City Water Co.,	Rapid Sand—Pittsburgh Filter Mfg. Co.,	150,000	70,000
Pennsylvania Industrial Reformatory.	800	Commonwealth of Pennsylvania,	Pressure Rapid Sand—Am. Water Sof. Co.,	1,000,000	300,000
Perkasie,	2,700	Perkasie Water Supply Co.,	Rapid Sand—Roberts Filter Mfg. Co.,	200,000	150,000
Philadelphia, U. Roxborough,		Municipal,	Slow Sand,	20,000,000	
Philadelphia, L. Roxborough,		Municipal,	Slow Sand—(Preliminary filters),	12,000,000	
Philadelphia, Belmont,		Municipal,	Slow Sand—(Preliminary filters),	40,000,000	
Philadelphia, Torresdale,		Municipal,	Slow Sand—(Preliminary filters),	240,000,000	287,000,000
Philadelphia, Queens Lane,	1,680,000	Municipal,	Slow Sand—(Preliminary filters),	70,000,000	288,000,000
Pittsburgh,	500,000	Municipal,	Slow Sand,	200,000,000	145,000,000
Pottstown & suburbs,	17,000	Pottstown Gas & Water Co.,	Rapid Sand—N. Y. Continental Jewell,	4,000,000	1,600,000
Punxsutawney, Big Run & Lindsey.	10,000	Lindsey Water Co.,	Pressure Rapid Sand—Greer,	2,000,000	1,034,000
Quarryville,	1,000	Quarryville Water Co.,	Rapid Sand—Roberts Filter Mfg. Co.,	240,000	30,000
Reading, Antietam plant,		Municipal,	Slow Sand,	5,250,000	
Reading, Bernhart plant,		Municipal,	Slow Sand,	4,500,000	
Reading, Egleman plant,		Municipal,	Slow Sand,	500,000	
Reading, Maiden Creek,	101,600	Municipal,	Slow Sand,	15,000,000	15,560,000
Ridgway,	5,000	Municipal,	Rapid Sand—Roberts Filter Mfg. Co.,	1,000,000	850,000
Royersford & Spring City,	6,000	Home Water Co.,	Rapid Sand—Morse & Jewell,	1,250,000	372,000
St. Benedict,	1,000	St. Benedict Water Co.,	Pressure Rapid Sand—Norwood Eng. Co.,	120,000	30,000
Sayre & Athens,	9,100	Sayre Water Co.,	Pressure Rapid Sand—Robert Wetherill Co.,	4,000,000	1,250,000
Scranton, Providence Dist.,*	60,000	Scranton Gas & Water Co.,	Rapid Sand—N. Y. Continental Jewell,	6,000,000	*6,000,000
Sharon & Farrell,	18,000	Sharon Water Works Co.,	Rapid Sand—N. Y. Cont. Jew. & Pitts. F. M. Co.,	4,000,000	2,665,000
South Bethlehem & vicinity,	30,675	Bethlehem Water Co.,	Semi-Rapid Sand—P. A. Maignen,	6,000,000	4,500,000
S. Bethlehem (steel plant),	10,000	Bethlehem Steel Co.,	Rapid Sand—Roberts Filter Mfg. Co.,	650,000	
S. Pittsburgh & suburbs,	179,500	South Pittsburgh Water Co.,	Rapid Sand—Am. W. Works & Guarantee Co.,	14,000,000	6,500,000

TABLE NO. 11—Continued

Place	Population supplied	Ownership	Type	Daily capacity of plant (gallons)	Average daily consumption (gallons)
Philadelphia, suburbs, Neshaminy,	----------	Springfield Cons. Water Co.,	Pressure Rapid Sand—J. W. Ledoux,	2,000,000	----------
Philadelphia, suburbs, Pickering Cr.	----------	Springfield Cons. Water Co.,	Rapid Sand—Warren,	2,400,000	----------
Philadelphia, suburbs, Pickering Cr.	----------	Springfield Cons. Water Co.,	Slow Sand,	1,600,000	----------
Philadelphia, suburbs, Crum Cr.,	126,000	Springfield Cons. Water Co.,	Pressure Rapid Sand—J. W. Ledoux,	5,400,000	8,070,000
Spring Grove,	1,400	P. H. Gladfelter Co.,	Rapid Sand—Warren & Norwich Eng. Co.,	4,000,000	50,000
Steelton,	15,300	Municipal,	Slow Sand—J. H. Fuertes,	3,000,000	1,700,000
Sunbury,	15,000	Sunbury Water Co.,	Rapid Sand—Pitts. Filter Mfg. Co.,	4,600,000	3,200,000
Tarentum & vicinity,	16,000	Allegheny Valley Water Co.,	Rapid Sand—Roberts Filter Mfg. Co.,	3,000,000	1,500,000
Vandergrift & vicinity,	11,490	Vandergrift Water Co.,	Rapid Sand—N. Y. Cont. Jewell & Roberts,	1,500,000	456,000
Warren,	15,600	Warren Water Co.,	Rapid Sand—Am. Water Works & G. Co.,	3,000,000	908,000
Washington & suburbs,	11,100	Citizens Water Co.,	Rapid Sand—Pitts. Filter Mfg. Co.,	3,000,000	1,243,000
Waynesburg & vicinity,	4,000	Waynesburg Water Co.,	Rapid Sand—Pitts. Filter Mfg. Co.,	1,000,000	90,000
Wernersville State Hosp.,	1,000	Commonwealth of Pennsylvania,	Rapid Sand—Chester and Fleming,	650,000	250,000
West Conshohocken,	1,650	West Conshohocken Water Co.,	Rapid Sand—Roberts Filter Mfg. Co.,	130,000	51,200
W. Pittsburgh & vicinity,	712	West Pittsburgh Water Co.,	Rapid Sand—W. B. Scaife,	240,000	65,000
West Reading & Wyomissing,	2,500	West Reading Water Co.,	Rapid Sand—Warren Jewell,	300,000	150,000
Wilkinsburg & vicinity,	93,800	Pennsylvania Water Co.,	Rapid Sand—Pitts. Filter Mfg. Co.,	10,000,000	8,594,000
Wilkes-Barre & suburbs, Huntsville.*	----------	Spring Brook Water Supply Co.,	Rapid Sand—Morrison Jewell,	8,000,000	*
Wilkes-Barre (Crystal L.),	70,000	Spring Brook Water Supply Co.,	Rapid Sand—Morrison Jewell,	6,000,000	----------
York & suburbs,	57,000	York Water Co.,	Rapid Sand—N. Y. Continental Jewell,	7,000,000	3,700,000
Wrightsville,	800	Wrightsville Water Supply Co.,	Rapid Sand,	144,000	25,000

*Only a small part filtered; population supplied as given represents approximately the equivalent population to the amount of water filtered

Other forms of purification recently adopted are treatment by hypochlorite of lime (bleaching powder) and liquid chlorine. These agents are applied at varying rates according to the character of the raw water. The amount, although minute and undetectable except by chemical analysis, destroys harmful bacteria, rendering the water safe for drinking. Some plants use this intermittently as an adjunct to filtration, and others as a simple and comparatively inexpensive method of sterilization. It is not a substitute for filtration, as it does not improve taste nor remove suspended matter, and requires expert supervision to insure safe and satisfactory results.

Partial filtration is sometimes accomplished by filter cribs or filter wells, as shown in Table No. 12, which indicates the location of such installations.

TABLE NO. 12

Filter Cribs and Infiltration Wells

Stream	Place	County	Ownership	Remarks
Filter cribs:				
Delaware River,	Easton,	Northampton,	Lehigh Water Co.,	
West Branch Susquehanna,	Muncy,	Lycoming,	Muncy Water Supply Co.,	Auxiliary supply
Little Conewago Creek,	New Oxford,	Adams,	Municipal,	
Allegheny River,	Etna,	Allegheny,	Municipal,	
Allegheny River,	Millvale,	Allegheny,	Municipal,	
Monongahela River,	Brownsville,	Fayette,	Brownsville Water Co.,	
Ohio River,	Colona,	Beaver,	Allaire Water Co.,	
Ohio River,	Monaca,	Beaver,	Municipal,	
Ohio River,	Sewickley,	Beaver,	Municipal,	
Infiltration wells:				
Hare Creek,	Corry,	Erie,	Corry Water Supply Co.,	
French Creek,	Franklin,	Venango,	Municipal,	Partial
Allegheny River,	Oil City,	Venango,	Municipal,	
Allegheny River,	Ford City,	Armstrong,	Municipal,	
Allegheny River,	Aspinwall,	Allegheny,	Municipal,	
Allegheny River,	Sharpsburg,	Allegheny,	Municipal,	
Clarion River,	Clarion,	Clarion,	Clarion Water Co.,	
Conemaugh River,	Blairsville,	Indiana,	Municipal,	
Monongahela River,	Duquesne,	Allegheny,	Municipal,	
Monongahela River,	Homestead,	Allegheny,	Municipal,	Partial
Monongahela River,	Braddock,	Allegheny,	Municipal,	
Monongahela River,	Fayette City,	Fayette,	Fayette City Water Co.,	
Ohio River,	Ambridge,	Beaver,	Municipal,	
Ohio River,	McKees Rocks, etc.,	Allegheny,	Ohio Valley Water Co.,	
Ohio River,	Baden,	Beaver,	Municipal,	
Ohio River,	Edgeworth,	Allegheny,	Edgeworth Water Co.,	
Ohio River,	Aliquippa,	Beaver,	Municipal,	
Ohio River,	Beaver,	Beaver,	Municipal,	
Ohio River,	Coraopolis,	Allegheny,	Municipal,	
Ohio River,	Part of Pittsburgh,	Allegheny,	Monongahela Water Co.,	
Ohio River,	S. Heights,	Beaver,	Crescent Beach Water Co.,	Partial
Ohio River,	Woodlawn,	Beaver,	Woodlawn Water Co.,	
Shenango River,	Sharpsville,	Mercer,	Municipal,	
Otter Creek,	Mercer,	Mercer,	Mercer Water Co.,	
Breakneck Creek,	Mars,	Butler,	Municipal,	Partial

CONSUMPTION

The total average daily consumption of water from public systems approximates 915,000,000 gallons, or about 150 gallons per capita, of which nearly half is used industrially. Beside this, the amount used in private industrial systems of which there is record exceeds the consumption from public systems by about 50%, and there is undoubtedly much of which no record has been made.

The per capita consumption in public systems, although important for indicating whether or not the water is being economically used, is often unobtainable, for there may be no means of measurement of a gravity supply, and where reliance is on pumps careful methods of computation are often lacking. The summary tables in each section give the per capita consumption where the total reported appeared reliable. These vary from 20 to 350 gallons, and occasionally more, increasing as a rule with the population. This is due to greater industrial and public use, larger domestic requirements and more waste and leakage. Table No. 13 shows the average per capita consumption for municipalities in Pennsylvania, according to certain ranges of population, based on the population served with water, and not necessarily the total population of the community. In smaller towns the percentage of population connected with the water system is often small, while in larger boroughs and cities almost all are usually supplied. In preparing the table there have been eliminated such places as are abnormal on account of exceptionally high industrial uses, such, for example, as Wilkes-Barre, where the colliery consumption is high, or places where, through poor management, there is unusual waste. The figures may, therefore, be taken to represent normal conditions of industry and of waterworks operation.

TABLE NO. 13

Consumption of Water, According to Population

Population	Average per capita consumption; gallons per 24 hours	Number of municipalities
Over 500,000,	186	2
100,000 to 500,000,	145	2
50,000 to 100,000,	132	7
25,000 to 50,000,	102	9
10,000 to 25,000,	93	34
5,000 to 10,000,	92	30
2,500 to 5,000,	80	51
Less than 2,500,	68	109

The quantity used for industrial purposes is an important factor affecting per capita consumption, causing wider fluctuations in smaller towns. The consumption in the summary tables at the be-

ginning of each section include domestic, industrial and public use and leakage, but the industrial uses are also given separately. Under this term "industrial" is often included the wholesale commercial consumers, such as stables, hotels, laundries, etc.

Much water collected is lost because of leakage from reservoirs, mains and house connections, and deliberate waste. One mile of distributing pipe has approximately 500 joints independent of house connections, and investigation has shown considerable leakage at joints. The defects in house connections and fixtures within the houses, and wastefulness of consumers, are serious items difficult to control. These losses will not be eliminated from any system unless the municipality, company and consumers endeavor to prevent them. The most effective means of correcting losses due to the consumer is by careful inspection or charging by meter measurement. Metering is generally accepted as equitable, but its introduction has not been as rapid as might be expected. Where a flat rate based upon the number of fixtures is customary, changes are made slowly, as it is recognized that with small consumers, except where there is actual waste, the expense of installing, caring for and reading the meters increases the cost of water if charged to the consumers, or places a burden on the company or municipality if it furnishes the meter. Practically the greatest advantage of metering water is the reduction of waste, because the consumer derives a direct pecuniary advantage from saving. The introduction of meters by municipal plants has been less common than by incorporated companies, but many of the latter have made but little progress in this direction. About 30% of all municipal and corporate systems meter domestic service, while only 7% use it exclusively.

The net economy in meters is a question to be considered by each waterworks and its consumers, and is determined by actual value of water sold and wasted, the cost of installing and maintaining meters, and the quantities supplied to customers.

During the droughts of 1908, 1909 and 1914 strenuous methods were required to reduce consumption: consumers were requested to stop waste, lawn and street sprinkling was prohibited, and in many towns the supply was restricted to certain hours in the day, or shut off entirely through the night. Available information showed that this, with repairing of plumbing, caused reductions in consumption of from 25% to 50%.

SPECIAL INDUSTRIAL USES

Large industries usually derive their supply from sources independent of the public system; thus, most steel and iron works located near rivers pump direct therefrom. Such plants use great quanti-

ties of water particularly for cooling purposes, where good quality is not always essential. A supply suited to public uses and in sufficient amount for these industrial purposes would often be impractical. Many sources of industrial supply have been so polluted by mine and other wastes as to require treatment to make them fit to use.

The anthracite mining companies usually furnish water to the miners' houses surrounding the collieries. There are often two separate systems, one carrying water to the houses and boilers, and the other for washing coal. Water for the latter purpose is usually pumped from the mines, and for the former is largely supplied by incorporated water companies controlled by the coal companies. In the coke region a similar condition exists.

The large tanneries use considerable water, furnished by the tanning companies, which often supply the houses of employes. This is true also with regard to glass plants, cement mills, paper mills and dye works.

The railroads obtain water by purchase from incorporated companies or municipal works, and from springs, streams and wells through works owned by the railroads. One large system supplies its main line principally by works of controlled incorporated water companies, with gravity supplies from many small streams.

The quantity used for industrial purposes varies greatly with the character of the industry. Thus, the Pittsburgh district, with only half the population and fewer industries in number and variety, uses considerably more than the Philadelphia region, because of the large consumption by steel works. The reduction of stream flow by industrial use is not so great as consumption figures indicate, because, especially in steel plants, a large proportion is returned to the stream from which it was taken. Even so the amount permanently removed is large and steadily increasing, and during minimum flows the high temperature of the mill effluent may so increase that of the stream as to reduce its effectiveness, and thus necessitate pumping larger quantities.

The district around Pittsburgh, included in sub-drainage basins 18, 19 and 20, and which uses most of the water in these sections, consumes about 800,000,000 gallons daily through private works for miscellaneous industries. This is as much as is used in the public systems of New York and Philadelphia combined.

STORAGE

The storage of water, conserving the wet season surplus in reservoirs for use during dry seasons, is in some sections of Pennsylvania an important feature, and the droughts of 1908, 1909 and 1914

accentuated the necessity of its extended application. Communities which believed the low water flow of their supply ample, found the discharge falling below the demand, restricted consumption, and in some instances provided additional supply or storage. It is better for such communities or water companies to conserve by storage, where practicable, the flow of one stream, making it an ample source, rather than use the natural flow of an additional stream. This practice will assist in satisfying the requirements of municipal and industrial demands.

Water storage has been considerably employed in the State and could be used to advantage by many more communities. It enables a large community to be supplied from a comparatively small stream, and provides ample water, which is usually of the best quality, as many bacteria are destroyed by air, sunlight and absence of food, while the water is clarified by settlement of suspended matter. In the coal regions, where all but the smallest streams are so polluted by mine washings as to render them worthless for use, storage has been of inestimable value. In the mountain districts, communities located at such an altitude that the neighboring streams are small, can usually obtain by storage an adequate supply. Storage is applicable chiefly to flowing streams, for spring and well supplies frequently have underground storage and such water deteriorates unless reservoirs are covered.

The fullest development of storage in Pennsylvania is in the coal regions and near the summit of the Allegheny Mountains. Among the largest municipalities which receive stored water are Pottsville, Mahanoy City, Shenandoah, Girardville, Ashland, Minersville, Tamaqua, Schuylkill Haven, Orwigsburg, Wilkes-Barre, Pittston, Scranton, Carbondale, Hazleton, Shamokin, Altoona, Tyrone, Johnstown, Greensburg, Irwin, Uniontown, Washington, Lebanon, Butler and Punxsutawney.

Table No. 14 shows the total storage in some of the more important systems; also the intensity of storage and the average daily consumption of water per square mile of watershed. The greater the intensity of storage the greater the "safe yield," i. e., the amount that can safely be drawn from day to day over a period of years of greatest drought. The relation between intensity of storage and safe yield varies according to the amount of rainfall and the proportion of such rainfall flowing off the surface; and, to those who are familiar with conditions, the average daily consumption per square mile will indicate whether or not the system is being drawn upon beyond what the watershed is likely to yield in years of drought. The table indicates that about 300 million gallons per square mile of storage is about the limit of development practiced in this State. Higher rates would probably mean that the reservoirs would seldom be filled, resulting

in the growth of vegetation on the sides, which, when covered, would injure the quality of the water; also, the cost of the additional yield obtained by additional storage would be excessive. The few cases in the table where this rate is exceeded are either natural lakes which draw upon underground areas of unknown extent, or are used for storage of surplus from other sources, or are of unwarranted capacity.

The largest quantity stored for water supply is on Quemahoning Creek, in Somerset County, by the Manufacturers Water Co., in a reservoir of 10,922,000,000 gallons capacity, on a watershed of 92 square miles.

Other large storage basins are those on Spring Brook, Luzerne County, capacity 1,629,000,000 gallons; on Harvey Creek, Luzerne County, capacity 2,956,000,000 gallons; on Toby Creek, capacity 1,-755,000,000 gallons, and on Wapwallopen Creek, capacity 1,650,000,000 gallons, the two latter being natural lakes whose outlets have been dammed; the Scranton Gas and Water Co., on Roaring Brook, capacity 2,117,200,000 gallons; Summit Water Supply Co., on North Branch of Little Conemaugh River, capacity 1,025,000,000 gallons; Manufacturers Water Co., on Hinckston Run, Cambria County, capacity 1,124,000,000 gallons. The total capacity of the storage reservoirs for water supply purposes in Table No. 14 is over 43,000,-000,000 gallons. There are also about 1,500,000,000 gallons of storage for water power and a large number of small water supply reservoirs not considered.

TABLE NO. 14

Principal Stored Water Supplies in Pennsylvania

Sec. No.	Name of system	Population supplied	Source of supply	Drainage area above intake (sq. mi.)	Storage (mil. gals.)	Storage per sq. mi. (mil. gals.)	Average daily consumption	
							Total (gallons) Note (a)	Per sq. mi. (gallons)
2	Panther Valley Water Co.,	20,000	Nesquehoning Cr.—Greenwood,		370.0	149.2	4,300,000	274,000
			Hauto,	9.70	1,078.0			
			Bear Creek (under construction),	1.10	80.0	72.7		
			Two other (intakes),	4.90		3		
				15.70	1,528.0	97.3		
3	Pottsville Water Co.,	34,400	Kauffman Run,	0.78	100.0	192.3		
			Eisenhuth Run,	1.30	300.0	230.8		
			Wolf Creek,	1.63	400.0	122.7		
3	Silver Creek Water Co.,	3,200	Big Creek (intake),	2.00				
			Silver Creek,	1.08	210.0	194.4	1,286,000	143,000
			Tumbling Run—Upper,	6.00	224.4	66.2		
			Lower,		173.0			
				9.08	607.4	66.9		
3	Crystal Water Co.,	5,000	West Branch, Schuylkill River,	4.50	55.3	12.3	2,162,000	480,000
2	Minersville Water Co.,	10,000	Dyers Run,	4.53	75.0	16.5		
			Two others,	1.67	3.0	1.8	1,000,000	161,000
				6.20	78.0	12.6		
5	Scranton Gas and Water Co.,	245,700	Stafford Meadow Br.,	11.5	2,892.3	251.4		
			Roaring Brook,	50.0	2,117.2	42.3		
			Racket Brook,	3.6	1,142.1	317.2		
			Leggett Cr. & Lake,	10.31	816.4	79.2		
			Fall Brook & Lake,	12.3	441.0	35.9		
			Lackawanna Creek,	33.0	325.0	9.8	36,000,000	225,000
			Tunkhannock Creek & Lake,	.5	304.0	608.0(¶)		
			Little Roaring Br.,	5.16	103.3	20.0		
			Grassy Island Creek,	3.52	99.0	28.2		
			Lehigh River,	15.2	80.0	5.3		

			Rush Brook,	4.9	52.0	10.6		
			Six others,	10.1	21.3	2.1		
				160.09	8,393.6	52.4		
5	Spring Brook Water Supply Co.,	317,147	Harveys Creek,	47.0	2,955.0	63.0		
			Tobys Creek,	14.84	1,755.0	118.2		
			Wapwallopen Creek & Crystal Lake,	3.13	1,650.0	527.0(¶)		
			Spring Brook,	54.5	1,629.0	29.9	56,456,000	330,000
			Mill Creek & Tributaries,	27.83	965.0	34.7		
			Falling Springs Creek,	1.75	300.0	171.5		
			Sugar Notch, Nanticoke & Newport Creeks	2.80	47.0	16.8		
			Coal Creek,	4.07	11.5			
			Other sources (small storage),	12.56	10.0			
				168.48	9,322.5	55.6		
			Dreck Creek,	2.46	237.0	96.3		
5	Wyoming Valley Water Supply Co.,	25,000	Catawissa Creek,	0.67	70.7	105.5	3,500,000	149,000
			Two others,	20.3	25.0	1.2		
				23.43	332.7	14.2		
			S. Branch Roaring Creek,	5.03	33.0	6.6	635,000	126,000
5	Wyoming Valley Water Supply Co. (Centralia, etc.)	4,200	Spring reservoirs,	----------	----------			
5	Roaring Creek Water Co. (The),	35,000	S. Branch Roaring Creek,	3.49	565.3	162.0		
			Trout Run,	2.83	38.0	13.4	4,500,000	605,000
			Eagle Run (intake),	1.12				
				7.44	603.3	95.4		
5	Girard Water Co. (The),	12,000	Dresher's Run,	0.87	264.0	303.0	1,400,000	490,000
			Whiskey Mill Creek (intake),	1.99	----------	----------		
				2.86	264.0	92.3		
5	Shenandoah Citizens Water and Gas Co.,	5,000	Kehley Run,	0.66	65.6	99.5	1,250,000	1,890,000(*)
5	Mahanoy City Water Co.,	19,000	Messers Run,	5.0	115.0	23.0		
			Coal Run,	0.53	41.0	77.4	2,000,000	352,000
			Pole Run,	0.14	39.0	278.5		
				5.67	195.0	34.4		
9	Anthracite Water Co.,	5,400	Mud Run,	0.73	202.7	278.0	1,045,000	762,000(†)
			Waste House Run,	0.64	106.8	166.9		
				1.37	309.5	226.0		

TABLE NO. 14—Continued

Sec. No.	Name of system	Population supplied	Source of supply	Drainage area above intake (sq. mi.)	Storage (mil. gals.)	Storage per sq. mi. (mil. gals.)	Average daily consumption	
							Total (gallons) Note (a)	Per sq. mi. (gallons)
10	Blair Gap Water Supply Co.,		Kettle Run,	2.9	187.8	64.8		
			Blair Gap Run,	12.5	143 7	11.5		
			Bell Gap Run,	14.0	63.0	4.5		
			Two others,	0.6	31.8	53.0		
10	Tyrone Gas & Water Co.,	7,000	Sinking Run No. 2,	4.0	100.0	25.0	2,000,000	200,000
			Sinking Run No. 1,	6.0	60.0	10.0		
				10.0	160.0	16.0		
10	Altoona Water Works,	55,500	Burgoons Run—Two upper reservoirs,	8.5	421.0	49.5		
			Lake Altoona (final),	11.2	1,600.0	142.9	5,200,000	295,000
			Sugar Run (intake),	6.4				
				17.6	2,021.0	114.8		
10	Allegheny Water Co. (The),	2,300	Mill Run,	6.0	65.0	10.8	1,201,000	200,000
12	Lebanon Water Works,	21,000	West Br. Hammer Creek,	1.12	52.0	46.4	1,850,000	96,000
			Hammer Creek (intake),	18.25				
				19.37	52.0	2.7		
17	Lindsey Water Co.,	10,850	Clover Run,	3.0	100.0	33.3	1,034,000	23,000
			E. Branch Mahoning Creek (intake),	42.0				
				45.0	100.0	2.2		
18	Apollo Water Works Co., Leechburg Water Works Co.	7,000	Beaver Run Tributary,	0.5	10.0	20.0		
			Beaver Run,	35.0	70.0	2.0	424,000	12,000
				35.5	80.0	2.3		
18	Johnstown Water Co.,	66,700	Salt Lick Run,	11.92	813.0	68.2		
			Dalton Run,	4.26	130.0	30.5	9,830,000	266,000

			Mill Creek,	6.46	129.0	20.0		
			Others,	14.76	15.0	1.0		
				37.00	1,087.0	29.4		
18	Manufacturers Water Co.,	----------	Quemahoning Creek,	92.0	10,922.0	118.8		
			Hinckston Run,	10.75	1,124.0	104.5	92,000,000	234,000
			Stony Creek intake,	290.0				
				392.75	12,046.0	30.7		
18	Summit Water Supply Co., High Ridge Water Supply Co.	----------	N. Br. Little Conemaugh River,	25.0	1,025.0	41.0		
			S. Fork Little Conemaugh River,	6.8	207.0	30.4		
			Little Sugar Run,	----------	143.2			
			Tub Mill Creek,	----------	201.6			
			Two others,	----------	85.7			
				----------	1,662.5			
19	Westmoreland Water Co.,	24,000	Township Line Run,	0.7	486.0	685.0(¶)		
			Nine Mile Run,	0.5	177.0	354.0(¶)	1,533,000	414,000(‡)
			Other (spring fed),	0.0	76.0			
			Intakes,	2.5	----------	200.0		
				3.7	739.0			
19	Mt. Pleasant Water Co.,	13,680	Jacobs Creek,	64.0	215.0	3.4	2,301,000	36,000
19	Uniontown Water Co.,	20,000	Hutchinson Run,	4.7	137.0	29.2	2,500,000	250,000(§)
			Two others,	5.3	27.7	3.5		
				10.0	164.7	16.5		
19	Mountain Water Supply Co.,	----------	Indian Creek,	109.0	251.0	2.3	5,600,000	52,000
20	Butler Water Co. (The),	20,000	Connoquenessing Cr.,	13.7	94.0	6.9		
			Connoquenessing Cr. (under constr.)	16.8	521.0	31.0	3,600,000	152,000
			Thorn Run,	6.9	206.0	29.8		
				23.7	821.0	34.7		
20	North Strabane Water Co.,	4,000	Lower Chartiers Creek,	46.0	20.0			
			Speers Run,	(3.0)	57.0	19.0	800,000	17,000
				46.0	77.0	1.7		

TABLE NO. 14—Continued

Sec. No.	Name of system	Population supplied	Source of supply	Drainage area above intake (sq. mi.)	Storage (mil. gals.)	Storage per sq. mi. (mil. gals.)	Average daily consumption	
							Total (gallons) Note (a)	Per sq. mi. (gallons)
20	Citizens Water Co. of McDonald,	6,000	St. Patricks Run,	3.5	90.0	25.7	501,000	6,000
			Raccoon Creek intake,	80.0				
				83.5	90.0	1.1		
20	Citizens Water Co. of Washington,	11,100	Chartiers Creek Tributary,	2.3	600.0	260.6	1,243,000	336,000
			Chartiers Creek Tributary,	1.4	106.0	75.7		
				3.7	706.0	190.8		

(a) NOTE:—The consumption per square mile of watershed tends to indicate whether or not the watershed is being drawn on in excess of the safe yield, i. e., beyond what it could furnish during a period of extended severe drought

(*)Buys water from the Girard Water Co.

(†)New sources under development

(‡)Agreement with Mountain Water Supply Co. for supply during droughts from Indian Creek reservoir.

(§)Buy water from Trotter Water Co.

(¶)These are abnormal and evidently due, in the case of lakes, to tributary underground areas of unknown extent, while in other cases, reservoirs may be used for storage of water from other sources not indicated

FIRE PROTECTION

To secure adequate fire protection ample water under sufficient pressure must be available through mains of proper size and through sufficient hydrants. Many systems lack these essentials as well as sufficient storage, dependence being placed on stream flow which, though in excess of ordinary consumption, is insufficient for fire purposes.

WATER RATES

When the 1909 report was published the regulation of water rates was not, as now, vested in the Public Service Commission, and a discussion of rates, based on a thorough study, was included in that report. The requirement of the Public Service Law as to publishing and filing rates, together with decisions of hearings, complaints and applications for approval of changes, has made some alterations, but the general conditions have not materially changed.

EXPLANATION OF TABLES AND DESCRIPTIONS

Five years beyond a census period brings considerable increase of population in some regions, hence an estimated population for 1915 has been given in the descriptions and used in tables, etc. These estimates come from three sources: (a) local; (b) estimated in this office on the basis of the change in the previous census decade, and (x) United States Census Bureau, and are clearly indicated in the tables.

Many systems cannot or do not measure the water used, and the figures are often estimates. These estimates in some cases were furnished by local authorities and in others assumed by this office, based on population supplied and the character of the district. The other figures are based on some actual method of measurement, such as pump displacement, meters, variations in reservoir level, etc., and per capita figures are entered for these only.

The industrial consumption is given according to the interpretation of those furnishing it, and in general includes also the large users, who would naturally be metered, such as laundries, stables, hotels, etc., generally termed "commercial users."

Numerous plants located in one section take their supply from over the divide in adjacent sections, or partly in each section. Such systems have been described in the section of principal supply.

The industrial utilization tables give the actual returns received, and do not pretend to show the total private industrial use of water. Inquiries were directed to the largest concerns and greatest water users. However, many plants are not listed, and in the congested districts especially are others using large quantities. Many opera-

tions in the coal regions were not heard from, hence the record is only partial. The tables are, nevertheless, valuable as covering considerable of the field and indicating the extent and character of the use of water.

Some wide variations in consumption reported from plants of similar quantity of output will be observed. It has been impossible to inquire into these cases, and they are given as furnished. Figures enclosed in parentheses indicate that they have been included in the consumption for the public systems and tabulated in the summary tables of the same.

The descriptions of the water supply systems are listed alphabetically, according to places supplied, and in those covering several places the principal one determines the arrangement.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The history of the water supply of nearly every large community shows that provisions for growing demands have seldom been made until they were forced by actual or imminent water shortage. The 1895 report of the Massachusetts State Board of Health stated: "The most familiar experience of this part of the world, at least in the matter of its water supply, has been the failure of sources, originally supposed to be abundant, to properly meet the wants of their respective communities for any considerable length of time. The plans of the city of Boston, beginning with its first scheme for a general water supply in the year 1825, have proved no exception to this rule, and yet this city has had the services of the ablest men of their day." A noteworthy example of the difficulty of anticipating the increase in water requirements is provided by the fact that in the 1876 Report of the Philadelphia Bureau of Water it was estimated that in 1910 the city would require 104,000,000 gallons per day, but when that date arrived the consumption was reported as 317,000,000 gallons daily.

Pennsylvania has experienced water famines in certain sections, and it is fair to assume that they will occur in other sections unless proper preventive provision is made. Foresight should be exercised to increase water supplies before shortage cripples industries and inconveniences the inhabitants.

Several times as much water is used for industrial as for domestic purposes, while that furnished by the private systems of industrial plants greatly exceeds the total supplied for all purposes from public water systems. Industrial development depends on an ample supply of water, which must increase as industries grow. There may be opportunity to effect economy and improve river conditions by providing district industrial supply systems of purified or raw water as conditions may require.

With increase of population and industry available sources are rapidly utilized, and others which might be used become polluted, so that it is increasingly difficult for individual communities to provide locally for their needs. Utilization of distant sources may be beyond the financial resources of a single community, but they can be developed through combination of communities, perhaps with industrial interests, so that the combined demand and resources will warrant the expenditure.

The city planning commission idea should be applied to the water supply question; but, as several communities may be involved in one project, the planning should usually be done by the State. Individual communities cannot always be depended upon to exercise foresight, nor have they the power to combine their interests. The failure to anticipate water deficiency is due to lack of appreciation of the rapidly increasing demand, and to lack of knowledge regarding the wide variations of stream flow. Moderate droughts occur often, but extreme ones come so infrequently that they make no lasting impression on the public mind, and, with satisfactory conditions restored, the people who had been affected feel a false security and fail to provide for the future. In this respect the effect of droughts is similar to that of floods.

Advantage may accrue from the construction of water systems for groups of communities. During each severe drought many towns experience water shortage and frequently obtain temporary relief from nearby industrial systems. Some of these are extensive, with large reservoirs and long mains, the system of the Pennsylvania Railroad between Philadelphia and Pittsburgh being a notable example. Water supply systems of steel, coal and coke companies are also called on for assistance in emergency. These large industrial companies are no doubt morally obligated to give needed relief, because their rights to the sources used are often covered by water company charters, and the monopolizing of such sources for industrial use may deprive nearby communities of their natural supply. But whilst the companies give assistance in many cases, this often renders it difficult for them to meet their own requirements.

Several extensive incorporated systems for public water supply have developed through consolidation of smaller companies, the most

important combinations being the Spring Brook Water Supply Company, near Wilkes-Barre; the Scranton Gas and Water Company, at Scranton, and the Springfield Consolidated Water Company, in the suburbs of Philadelphia. The first named company affords an apt illustration of what the consolidation of communities accomplishes, for it connects, with one system of mains, 2 cities, 28 boroughs and numerous villages in adjacent townships. If the merged companies had remained independent probably many of the communities would have experienced shortage of supply, interruptions from accidents, and a generally less satisfactory supply. Such consolidations, when well managed and under proper State regulations, are advantageous, as they avoid duplication of equipment and operating force, and also effect increased security against shortage and interruption, as the works can be operated under better direction.

Had a farsighted State policy for the development of water resources been adopted years ago, much saving would have been effected. There is need for investigation to determine practical methods for developing water storage, constructing conduits and supplying water wholesale to communities, railroads and large industries, where present and future needs require it. Small communities, financially unable to develop independent works, should be enabled to connect with trunk mains and enjoy the advantages of a public supply. Study of the future needs of districts where shortage exists or is imminent, and investigation of proposed sources from which to secure additional supply, should be made by the State at an early date.

For example, the coal region of Schuylkill and surrounding counties suffers severely during droughts, some large communities being compelled to cut off the water supply entirely, except for a short period of the day, water for mine use must be hauled, and occasionally the mines are shut down. Location at high elevations, often near the sources of the streams, pollution, and coal underlying reservoir sites, as well as lack of financial resources, are contributory causes of shortage.

Another region to be considered is that embracing the numerous communities along the lower Lehigh River, with a present population of about 200,000. It is a busy, growing district, in which the great cement and steel works, silk and textile mills now use large quantities of water, and study should be made of its future demands and how to meet them. Johnstown and the many neighboring boroughs and small villages form another important and growing industrial district in which bad conditions, due to lack of a broad, systematic development and utilization of water resources, are already noticeable. Four water systems that furnish domestic supply to Johnstown and industrial supplies to the Cambria Steel Company, the Pennsylvania Railroad and others, have extensive works, including several reservoirs, four

of which have a combined storage of nearly 14,000,000,000 gallons. In the adjoining region are a number of boroughs and villages with small independent systems, often with limited water resources, and some settlements that are not supplied. The total average daily consumption in this entire region approximates 120,000,000 gallons, the bulk of which is used in the steel industries, while the total population supplied is about 120,000. Had a comprehensive cooperative plan of water development been made in earlier years the entire district would probably have been served at less cost and with less conflict of interests than at present. In other localities where troublesome conditions exist future development can be materially aided through timely consideration by the Commonwealth of their prospective requirements.

Water supply projects may frequently be carried out in conjunction with those for flood prevention, water power, or other utilizations. Storage reservoirs are always advantageous, for besides conserving the supply in dry periods, they improve the quality of the water by settlement and exposure to air and sunlight. Water used for power could be used for supply—Los Angeles' new supply being an example. Reservoirs for water supply or power, which provide an upper zone always available for flood absorption, enables two or more purposes to be achieved in one project.

The proposition that the State should take, in such districts, the same position which a planning commission takes with regard to a city's future growth is not new nor untried. The 1894 Report, Volume 3, of the State Geological Survey of New Jersey, published the results of studies and investigations, pointing out the necessity of providing for future water supply, and that State has lately taken steps toward acquiring watersheds, one in the northern part, together with extensive works of a large water corporation, and another in the southern part as yet undeveloped, which are expected to insure ample supply for much of the State for many years. The State Water Supply Commission of New Jersey has, by recent acts of Assembly, been constituted a corporate body to acquire and hold property for conservation purposes.

Pennsylvania laws offer no adequate way by which a group of communities can combine for a water supply under public ownership and operation and obtain the resultant advantages. At present such advantages are possible only under corporate ownership, effected through consolidation. While special acts of the Legislature permit extension of municipal works, under certain conditions, into territory outside of municipal limits, and authorize boroughs to unite with others or with townships to construct or acquire waterworks, they are of restricted application.

The New York Conservation Law, enacted 1911, provides: "Sec. 525. * * * Said Commission shall also report the advisability of, the time

required for, and the expenses incident to, the construction of a State system of water supply * * * for all or any of the municipal corporations and other civil divisions of the State, and make such recommendations connected with the subjects of such investigations herein provided for as said Commission shall determine."

Under the law the "Orleans Water Supply Project" was planned, contemplating the supply of a large territory in five counties in the northwestern part of the State, in which are 15 municipalities with populations ranging from 1,000 to 20,000, and many smaller places, the aggregate being 120,000. Surveys and field investigations were made and plans and estimates prepared showing that at materially less cost than these communities have incurred for their present inadequate and, in some cases, unsatisfactory supplies, they could obtain ample pure water for many years. This plan provides for a storage reservoir, filter and gravity supply, the delivery ranging from 10 to 45 miles.

In April, 1913, an amendment to the Conservation Law of New York was passed, providing for "Union Water Districts." This amendment enables a number of municipalities to combine and form a district, to be represented by trustees who are the executive officers of each muncipality. These trustees may apply to the Conservation Commission to investigate and make necessary surveys, plans, estimates, etc., for a water supply. If it should approve the scheme and make the plans, etc., referred to, the Commission may submit a report to the trustees. If authorized by a popular vote, municipal bonds, not subject to the constitutional debt limit provisions, may be issued and the proceeds deposited to the credit of the Conservation Commission, which shall then construct the works. The law provides for the construction, operation and maintenance of the works by the State, and the sale and delivery of water wholesale to the distribution systems of the separate muncipalities.

Under this act the Charlton Union Water District was formed, comprising the cities of Cohoes and Watervliet, the town of Waterford and the village of Green Island, with a total population of 51,000; and the Conservation Commission submitted a report for a supply of 15,000,000 gallons per day, or about two and one-half times the present consumption, at an estimated cost of approximately $25 per 1,000,000 gallons. The plan provided for a 3,000,000,000 gallon reservoir formed by a 77-foot earth dam, the total estimated cost of the works, including land, being $1,800,000. The project was not carried out, as one of the municipalities subsequently decided to construct independent works.

In the territory within a 10-mile radius of the center of Boston, known as the Metropolitan District, a water supply, ample for many years, was developed by the Metropolitan Water Board (now the Metropolitan Water and Sewerage Board), and has been supplying wholesale to cities and towns within the district. A sewerage and

park system has been built and operated in a similar manner. The same principle was employed in northern New Jersey, in connection with the construction and operation of a trunk sewer for the cities and towns about Newark. In this same State a marked advance has lately been made in State regulation of water resources and aid in securing ample water supply to communities, the Water Supply Commission being empowered to acquire land, construct new works or condemn existing plants, to operate them and sell water to municipalities, and to issue bonds for such purposes.

An act of the Legislature of California, "to provide for the incorporation, organization and management of municipal water districts" (Statutes of 1909, page 1097), provides for the formation of water districts upon ratification of the project by each of the municipalities affected. Such district, through a board of directors representing the various municipalities in proportion to the number of registered voters in each, is empowered to acquire and furnish a water supply, With few minor exceptions the power of the district is limited to supplying the water, the details of distribution being left to the municipalities. The executive officers are three commissioners chosen by the board of directors, and the district may issue bonds if authorized by a two-thirds vote of the electorate at a special election.

In April, 1911, another act was passed for the same purpose (California Statutes, 1911, page 1290). The principal difference between this act and that of 1909 is that in the 1911 act the initial proceedings are required to be by petition signed by at least 25% of the real estate owners within the district; and that it does not provide for the formation of a district out of parts of two counties, as does the act of 1909. The former act, however, is still in force.

The California law differs from those of the other States cited, in that the State takes no direct part in the development of projects, but merely provides for the incorporation of water districts to be governed by local authorities.

In 1912 the Marin Municipal Water District, just north of San Francisco, was formed for developing a supply for several towns and villages of 135,000 aggregate population, and covering an area of 135 square miles, at present served by two large and 16 small water companies. Plans have been made for a supply of 5,000,000 gallons per day (at an estimated cost of $1,200,000), which may later be increased to 15,000,000 gallons. This plan involves the purchase of the two large operating companies. The valuation of these companies, and the condemnation of watersheds, is now before the Railroad Commission and the courts, respectively, for decision, and construction is expected to begin soon.

The abundant water in Pennsylvania is used to the greatest extent in the southern half of the State and more particularly in the areas

within a 100-mile radius of Philadelphia, and within a 70-mile radius of Pittsburgh. Stretching between these two, a narrow strip bordering the Pennsylvania Railroad main line is also a large water-using district. This leaves more than half the area of the State, principally in the northern part, with water resources little used. Many streams are still available for water supply in the first described area of high utilization, especially in the western part, but their use is hindered by present pollution and the expense of land and water rights. These streams are mostly available for the projects of moderate size. The northern region, which is comparatively sparsely settled, is the natural field for development of large projects; the eastern portion, particularly the wild forested country in Wayne, Pike and Monroe counties, being especially promising.

RECOMMENDATIONS

The foregoing discussion suggests the importance of extensive studies to determine how the rivers and streams of the State can be best conserved and developed to make public water supplies more generally available in the future, and how this study may embrace flood prevention, stream regulation and water power development.

The Commission, therefore, recommends the passage of an Act directing it to continue investigations of the water resources of the State, and to make studies of projects for meeting the future needs of such localities as are now, or apparently soon will be, in need of general systems of water supply to satisfy their growing demands, and by authority of which groups of communities may combine to secure water in a manner similar to that provided by other States.

The Commission also calls attention to the following features in which the existing law relating to water companies should be modified:

There are three classes of water companies provided for under the Act of 1874 and the supplements thereto:

(1) For the supply of water to the public for ordinary domestic use.

(2) For the supply, storage and transportation of water and water power for commercial and manufacturing purposes.

(3) For the storage, transportation and furnishing of water for manufacturing and other purposes, and for the creation, establishing, furnishing, transmission and use of water power therefrom.

The second and third class corporations are not materially different. They are to supply water for other than domestic use, and the first class companies, although some authorities hold they are permitted to supply for domestic purposes only, invariably supply it for both domestic and industrial use; in fact it could not practically be

therwise. Companies of the second and third class are comparatively ew and are usually holding corporations of water companies of the irst class. There is no apparent need for more than two classes of vater companies, viz., one for water supply and one for water power. A water supply company should not be chartered for either domestic or industrial use alone, but should be obliged to furnish for both purposes; and in case of shortage domestic service should take precedence.

A water company, under the interpretation of the existing law, is imited, in the territory it may supply, to a single municipal division, a city, borough or township, or a part thereof. Two or more municipal divisions, however, may not be joined under one charter, making t necessary, if a community lies in two townships, to obtain two charters or have recourse to the provisions of the Act of May 21, 1901, whereby, on petition, property owners adjacent to a chartered territory may be supplied. The existing statutes should be amended to permit a water company to supply any district with properly defined boundaries, and the Water Supply Commission or the Public Service Commission should determine, before approving the application, whether the applicants can or should serve the area desired.

TABLE NO. 15

Summary of Consumption Statistics by Sections

Section			Area		Population—(1910 census)				
No.	Name	Characteristics	Total sq. mi.	Percent. of State	Total	Percent. increase 10 yrs. (b)	Percent. of State	Per sq. mi.	Percent. urban
1	Delaware, Upper,	Summer resorts, etc.,	1,794	4.0	118,470	10	2	65	44
2	Delaware, Middle,	Cement, steel, slate, agriculture,	1,949	4.3	309,480	20	4	171	48
3	Delaware, Lower,	Rural and suburban, anthracite, iron, manufacturing	2,717	6.0	2,233,400	20	29	822	84
4	Susquehanna, N. B., Upper,	Agriculture, lumber, tanneries,	3,274	7.3	139,240	—10	2	45	12
5	Susquehanna, N. B., Lower,	Anthracite, miscellaneous manufacturing,	1,733	3.8	660,750	32	9	375	65
6	Susquehanna, W. B., Upper,	Bituminous coal, coke, lumber, tanneries, agriculture	2,615	5.8	150,470	18	2	57	22
7	Susquehanna, W. B., Middle,	Agriculture,	2,514	5.6	81,920	0	1	32	29
8	Susquehanna, W. B., Lower,	Agriculture,	1,784	4.0	126,380	5	2	72	44
9	Susquehanna, Main, Middle,	Anthracite and agriculture,	1,450	3.2	236,660	14	3	163	50
10	Susquehanna, Juniata, Upper,	Agriculture, railroad center, mineral springs	2,001	4.4	166,660	18	2	83	45
11	Susquehanna, Juniata, Lower,	Agriculture,	1,425	3.2	68,780	9	1	48	17
12	Susquehanna, Main, Lower,	Steel, miscellaneous manufacturing, cigars, agriculture	4,121	9.1	586,600	11	8	142	40
13	Potomac,	Agriculture,	1,570	3.5	87,030	5	1	55	29
14	Genesee,	Agriculture,	96	0.2	2,921	--11	--	30	0
15	Erie,	Agriculture, lake shipping, misc. mfg.,	512	1.1	98,300	22	1	192	70
16	Ohio, Allegheny, Upper,	Oil, gas, mineral springs, small mfg.,	4,490	10.0	245,690	0	3	54	27
17	Ohio, Allegheny, Middle,	Bituminous coal, brick, tanneries, oil, glass	2,900	6.4	221,550	15	3	76	21
18	Ohio, Allegheny, Lower,	Steel, coal, coke, misc. mfg., agriculture,	2,381	5.3	923,830	29	12	386	75
19	Ohio, Monongahela,	Steel, coal, coke, misc. mfg., agriculture,	2,728	6.0	720,800	54	9	264	44
20	Ohio, Main,	Steel, glass, brick, oil, gas, agriculture,	3,072	6.8	486,180	33	6	158	44
	Totals,		45,126	100.0	7,665,111k	22	100	171	60

(a)Based on estimated population supplied in 1915
(b)Two sections show decrease as indicated by minus signs
(c)One village municipally supplied
(d)This represents the total amount taken out of the section by public systems; of this, 8,500,000 gallons is consumed in Section No. 9
(e)This represents the total amount taken out of the section by public systems. About 8,500,000 gallons additional is obtained from Section No. 5
(f)One township (1st class), municipally supplied
(g)Thirteen cities are supplied wholly by 13 municipal systems; 17 cities are supplied wholly by corporate systems; 5 cities are supplied by combinations of the above or with private systems in 4 of which the municipal supply predominates and in 1 of which the corporate supply predominates.

TABLE NO. 15.—Continued.

Places			Cities		Boroughs				Villages	
No.	Name	Characteristics	Number	Municipal supply	Number	Number supplied	Municipal	Private supply	Number supplied	Private supply
1	Delaware, Upper,	Summer resorts, etc.,	1	0	17	13	2	1	11	0
2	Delaware, Middle,	Cement, steel, slate, agriculture,	2	1	54	41	10	1	27c	3
3	Delaware, Lower,	Rural and suburban, anthracite, iron, manufacturing	4	1	98	77	14	0	167	1
4	Susquehanna, N. B., Upper,	Agriculture, lumber, tanneries,	0	0	49	32	4	1	10	6
5	Susquehanna, N. B., Lower,	Anthracite, miscellaneous manufacturing,	5	0	64	60	1	--	74	1
6	Susquehanna, W. B., Upper,	Bituminous coal, coke, lumber, tanneries, agriculture	1	1	37	22	4	1	18	1
7	Susquehanna, W. B., Middle,	Agriculture,	1	1	15	14	7	0	17	2
8	Susquehanna, W. B., Lower,	Agriculture,	1	0	21	16	2	1	6	0
9	Susquehanna, Main, Middle,	Anthracite and agriculture,	0	0	31	20	2	0	23	5
10	Susquehanna, Juniata, Upper,	Agriculture, railroad center, mineral springs	1	1	32	18	10	3	16	3
11	Susquehanna, Juniata, Lower,	Agriculture,	0	0	18	12	1	3	10	1
12	Susquehanna, Main, Lower,	Steel, miscellaneous manufacturing, cigars, agriculture	4	3	94	67	17	2	43f	3
13	Potomac,	Agriculture,	0	0	11	9	3	1	8	2
14	Genesee,	Agriculture,	0	0	1	1	0	0	2	0
15	Erie,	Agriculture, lake shipping, misc. mfg.,	1	1	11	4	4	0	0	0
16	Ohio, Allegheny, Upper,	Oil, gas, mineral springs, small mfg.,	6	3	49	24	5	3	11e	4
17	Ohio, Allegheny, Middle,	Bituminous coal, brick, tanneries, oil, glass	0	0	45	27	10	0	4	1
18	Ohio, Allegheny, Lower,	Steel, coal, coke, misc. mfg., agriculture,	2	0	71	59	12	4	44	5
19	Ohio, Monongahela,	Steel, coal, coke, misc. mfg., agriculture,	4	1	108	70	8	1	108	0
20	Ohio, Main,	Steel, glass, brick, oil, gas, agriculture,	2	0	100	54	19	1	11	1
	Totals,		35g	13g	926	640h	135h	23h	610i	39i

(h)135 boroughs are supplied wholly by 133 municipal systems; 462 boroughs are supplied wholly by corporate systems; 23 boroughs are supplied wholly by private systems; 20 boroughs are supplied by various combinations of the above, in 10 of which the municipal supply predominates; in 9 of which the corporate supply predominates, and in 1 of which the private supply predominates

(i)One first class township supplied wholly by 1 municipal system; 2 villages supplied by extensions of other municipal systems; over 600 villages or parts of townships supplied largely by incorporated systems. Besides these there are over 140 localities supplied incidentally by private industrial water systems which are not listed above

(k)Estimated 1915, 8,490,000

TABLE NO. 15.—Continued.

Section			Supplies						Consumption (Public systems)	
			Source			Method				
No.	Name	Characteristics	Surf.	Under-ground	Comb.	Grav.	Pump.	Comb.	Total M. G. D.	Per capita (gals.) (a)
1	Delaware, Upper,	Summer resorts, etc.,	7	10	6	12	4	7	6.2	123
2	Delaware, Middle,	Cement, steel, slate, agriculture,	7	26	12	20	1	24	44.2	218
3	Delaware, Lower,	Rural and suburban, anthracite, iron, manufacturing	30	26	13	23	28	18	342.6	159
4	Susquehanna, N. B., Upper,	Agriculture, lumber, tanneries,	13	21	6	24	0	16	5.4	118
5	Susquehanna, N. B., Lower,	Anthracite, miscellaneous manufacturing,	15	14	14	9	16	18	113.6d	150
6	Susquehanna, W. B., Upper,	Bituminous coal, coke, lumber, tanneries, agriculture	19	11	1	17	6	8	6.8	107
7	Susquehanna, W. B., Middle,	Agriculture,	10	12	3	21	1	3	8.1	204
8	Susquehanna, W. B., Lower,	Agriculture,	4	2	6	2	1	9	10.9	143
9	Susquehanna, Main, Middle,	Anthracite and agriculture,	12	24	2	27	7	4	8.5e	104
10	Susquehanna, Juniata, Upper,	Agriculture, railroad center, mineral springs	17	11	0	19	7	2	11.2	113
11	Susquehanna, Juniata, Lower,	Agriculture,	6	12	1	17	--	2	4.0	133
12	Susquehanna, Main, Lower,	Steel, miscellaneous manufacturing, cigars, agriculture	25	44	10	27	34	18	33.4	92
13	Potomac,	Agriculture,	7	10	2	10	6	3	12.5	359
14	Genesee,	Agriculture,	--	2	--	1	--	1	0.05	56
15	Erie,	Agriculture, lake shipping, misc. mfg.,	1	2	2	2	2	1	17.3	201
16	Ohio, Allegheny, Upper,	Oil, gas, mineral springs, small mfg.,	8	24	12	15	13	16	16.6	132
17	Ohio, Allegheny, Middle,	Bituminous coal, brick, tanneries, oil, glass	11	22	3	10	21	5	7.1	121
18	Ohio, Allegheny, Lower,	Steel, coal, coke, misc. mfg., agriculture,	33	23	9	27	30	8	168.5	196
19	Ohio, Monongahela,	Steel, coal, coke, misc. mfg., agriculture,	27	12	8	11	29	7	52.8	113
20	Ohio, Main,	Steel, glass, brick, oil, gas, agriculture,	19	30	--	5	37	7	44.7	171
	Totals,		271	338	110	299	243	177	914.7	155

(d) This represents the total amount taken out of the section by buplic systems; of this, 8,500,000 gallons is consumed in Section No. 9.
(e) This represents the total amount taken out of the section by public systems. About 8,500,000 gallons additional is obtained from Section No. 5.

TABLE NO. 16—SUMMARY OF CONSUMPTION STATISTICS BY SECTIONS

(Consumption figures in million gallons daily unless otherwise noted)

Number	Name	Characteristics	Public supplies			Private industrial supplies				Grand total consumption			
			Domestic (assumed†)	Industrial (assumed†)	Total	Coal or coke	Railroad	Miscellaneous*	Total	Domestic	Industrial	Total	Per square mile (gallons)
1	Delaware, Upper,	Summer resorts, etc.,	3.80	2.45	6.25	--------	1.64	9.81	11.45	3.80	13.90	17.70	16,000
2	Delaware, Middle,	Cement, steel, slate, agriculture,	21.01	23.20	44.21	9.59	5.67	169.94a	185.20	21.01	208.40	229.41	118,000
3	Delaware, Lower,	Rural and suburban, anthracite, iron, mfg., misc.	196.13	146.50	342.63	0.61	8.08	91.16	99.88	196.13	246.38	442.51	163,000
4	Susquehanna, N. B., Upper	Agriculture, lumber, tanneries,	3.46	1.90	5.36	0.16	7.58	2.04	9.78	3.46	11.68	15.14	5,000
5	Susquehanna, N. B., Lower	Anthracite, misc., mfg., agriculture	37.46	76.10	113.56	6.99	2.76	1.62	11.37	37.46	87.47	124.93d	72,000
6	Susquehanna, W. B., Upper	Bit. coal, coke, lumber, tanneries,	3.53	3.30	6.83	1.77	5.10	3.90	10.77	3.53	14.07	17.60	7,000
7	Susquehanna, W. B., Middle	Agriculture,	5.78	2.30	8.08	0.05	3.35	1.41	4.81	5.78	7.11	12.89	5,000
8	Susquehanna, W. B., Lower	Agriculture,	6.50	4.40	10.90	0.34	1.67	0.85	2.86	6.50	7.26	13.76	8,000
9	Susquehanna, Main, Middle	Anthracite and agriculture,	4.42	4.10	8.52	2.74	0.90	0.02	3.66	4.42	7.76	12.18c	8,000
10	Susquehanna, Juniata, Upper	Agriculture, railroad center, mineral springs	9.47	1.70	11.17	0.30	7.76	13.88	21.94	9.47	23.64	33.11	16,000
11	Susquehanna, Juniata, Lower	Agriculture,	1.93	2.10	4.03	--------	2.70	15.38	18.08	1.93	20.18	22.11	16,000
12	Susquehanna, Main, Lower	Steel, misc. mfg., cigars, agriculture	20.75	12.60	33.35	0.50	5.82	54.98	61.30	20.74	73.90	94.64	23,000

*Partial only. Canvass of only largest users. Numerous cases having comparatively large consumption not obtained

cThis represents the total amount taken out of the section, of this approximately 8,500,000 gallons additional is obtained from Section No. 5

†Assumed on basis of returns made

dThis represents the total amount taken out of the section, of this approximately 8,500,000 gallons is consumed in Section No. 9

TABLE NO. 16.—Continued

Number	Name	Characteristics	Public supplies			Private industrial supplies				Grand total consumption			
			Domestic (assumed†)	Industrial (assumed†)	Total	Coal or coke	Railroad	Miscellaneous*	Total	Domestic	Industrial	Total	Per square mile (gallons)
13	Potomac,	Agriculture,	6.03	6.50	12.53	--------	0.87	----------	0.87	6.03	7.37	13.40	8,000
14	Genesee,	Agriculture,	0.05	0.00	0.05	--------	0.04	----------	0.04	0.50	0.04	0.09	1,000
15	Erie,	Agriculture, lake shipping, miscellaneous manufacturing	11.81	5.50	17.31	--------	1.07	----------	1.07	11.81	6.57	18.38	36,000
16	Ohio, Allegheny, Upper	Oil, gas, mineral springs, small mfg.	10.64	6.00	16.64	--------	4.67	6.45	11.12	10.64	17.12	27.76	6,000
17	Ohio, Allegheny, Middle	Bit. coal, brick, tanneries, oil, glass	5.01	2.10	7.11	3.14	4.36	21.36	28.86	5.01	30.96	35.97	12,000
18	Ohio, Allegheny, Lower	Steel, coal, coke, misc. mfg., agriculture	74.24	94.30	168.54	3.32	8.70	157.95a	169.97	74.24	264.27	338.51	142,000
19	Ohio, Monongahela,	Steel, coal, coke, misc. mfg., agriculture	29.85	23.00	52.85	11.80	12.06	552.56a	576.42	29.85	599.42	629.27	231,000
20	Ohio, Main,	Steel, glass, brick, oil, gas, bit. coal, agriculture	32.23	12.50	44.73	3.60	12.44	371.39	387.43	32.23	399.93	432.16	141,000
	Total,		484.10	430.55	914.65	44.94	97.24	1,474.70	1,616.88x	484.10	2,047.43x	2,531.53	56,000

aAmount circulated through plants. Probably 90% returned to stream at considerably increased temperature
xIncludes 2,430,035 gallons domestic supply incidental to industrial plants

SECTION No. 1

DELAWARE RIVER

UPPER DELAWARE SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Rairoad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

SECTION No. 1

DELAWARE RIVER, UPPER DELAWARE SUB-BASIN

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section is in the extreme notheastern part of the State, and comprises all territory draining into the Delaware River north of the mouth of the Lehigh River, including Easton. It is diamond shaped, 90 miles long, north and south, and 45 miles in greatest width, having an area of 1,794 square miles or about 4% of the State. It includes all of Pike County, the greater part of Wayne and Monroe counties, a large portion of Northampton and a small portion of Lackawanna County.

SURFACE CHARACTERISTICS

It is a rough, mountainous plateau region beyond the limit of the Allegheny Mountains. Above the terminal moraine, which crosses Carbon and Monroe counties, it contains numerous lakes and ponds and swampy areas at headwaters of streams. The principal tributaries are the Lackawaxen River and its tributary, Wallenpaupack Creek; Shohola, Bushkill, Brodheads and Martins Creeks.

The population in 1910 was over 118,000, being about 2% of that of the State; an increase of over 12,000, or 10%, since 1900. The density of population is 65 per square mile, being 14 in Pike County and increasing to 358 in Northampton County, in which are Easton and several large boroughs. The urban population is over 52,000, or 44%.

RESOURCES AND INDUSTRIES

The northern part is a summering and recreation country, with some farming and lumbering. In the extreme southern part, in Northampton County, the manufacture of cement and silk goods and the quarrying of slate are the important industries. Easton, with

30,000 population, is a busy industrial city, particularly as a distributing point for the cement industry in the adjoining territory of Section 2. There is also considerable farming in the southern part.

WATER SUPPLY

There is abundant water available in the springs, lakes and streams of this section for supply purposes, but there is little demand for it except in the extreme southern part, owing to the sparsity of population. The principal use of water for supply purposes is in the southerly portion, over 60% of the entire consumption being used within a radius of 20 miles of Easton; this city uses nearly 50% and the railroads use 30% of the total. The aggregate population served by water supply systems is about 50,000. The greater part of this section is undeveloped and has no water supplies of magnitude; it, therefore, is a promising field for additional supply to the congested regions to the west and south.

Ground and surface sources are used about equally in number, but by far the greatest quantity is taken from streams in the southern portion, and particularly from the Delaware River at Easton. In the vicinity of Easton, along the Lehigh River and Bushkill Creek, are numerous limestone springs and artesian wells discharging freely from the limestone rock. Gravity supplies considerably outnumber pumping systems, as is to be expected in a region composed mostly of small communities. There are only two municipally owned systems out of 13 boroughs and one city supplied.

INDUSTRIAL SUPPLIES

The cement mills, slate quarries and railroads are the largest users of water for industrial purposes. These, together with a number of small manufacturing plants, have an aggregate industrial consumption of considerably over 11,450,000 gallons per day, this figure being the amount used by those plants from which returns have been obtained. The principal sources of supply are the Delaware River, artesian wells, and springs.

The following tables give a summary of the water supplies in this section. Following these are detailed descriptions of the water supply systems of this section arranged alphabetically according to places:

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 1

Place	County	Ownership or Control	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Bangor,	Northampton,	The Bangor W. Co.,	6,000	6,000			1				
Roseto,			1,250b								
Blooming Grove,	Pike, Blooming Grove Twp.,	The Blooming Grove Park Club (private)		(182b)							
Buck Hill Falls,	Monroe, Barrett Twp.,	Buck Hill W. Co.,	1,200	*1,200 1,000						1	
Bushkill,	Pike, Lehman Twp.,	Bushkill W. Co.,	300	*600 50						1	
Delaware Water Gap,	Monroe,	Delaware Water Gap W. S. Co.,	450	200					1		
Dingman's Ferry,	Pike, Delaware Twp.,	Dingman's Ferry W. Co.,	150	*700 150						1	
East Bangor,	Northampton,	Municipal,	1,400	800				1			
Easton,	Northampton,	Lehigh W. Co.,	30,206x	16,000	1						
West Easton,			1,200				—				
Wilson Twp. (part),		The South Easton W. Co.,		3,450	1					—	
East Stroudsburg,	Monroe,	Municipal,	4,400	4,200				1			
Hawley,	Wayne,	Hawley W. Co.,	2,500	1,500			1				
Honesdale,	Wayne,	Honesdale Cons. W. Co.,	5,400b	5,400			1				
Seelyville,	Wayne, Texas Twp.,									—	
Matamoras,	Pike,	Matamoras Citizens W. Co.,	1,800	1,000			1				
Milford,	Pike,	Milford W. Co.,	900	900			1				
Mt. Pocono,	Monroe, Coolbaugh Twp.,	Fairview W. Co.,	300	*1,500 200						1	
Mountain Home,	Monroe, Barrett Twp.,	Mountain Home W. Co.,	150b	100						1	
Pompeii,	Northampton, Plainfield Twp., Washington Twp.	Plainfield W. Co., Pompeii W. Co.	500b	450						1	
Portland,	Northampton,	Portland W. Co.,	700	400			1				
Shawnee,	Monroe, Smithfield Twp.,	Shawnee W. Co.,	200b	*250 75						1	
		Manwalamink W. Co.,		*275 100						1	

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 1—Continued

Place	County	Ownership or Control	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Spruce Cabin Inn,	Monroe, Barrett Twp.,	Canadensis W. Co.,	100	*100						1	
Stroudsburg,	Monroe,	Stroudsburg W. Supply Co.,	5,000	5,000							
Swiftwater,	Monroe, Pocono Twp.,	Swiftwater Water & Power Co.,	150b	100b						1	
Waymart,	Wayne,	Waymart W. Co.,	439	210			1				

xU. S. census
*Summer population
bEstimated by Water Supply Commission

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 1—Continued

Place	County	Ownership or Control	Supply: Source: Surf.	Supply: Source: Ground	Supply: Source: Comb.	Supply: Method: Grav.	Supply: Method: Pumped	Supply: Method: Comb.	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Bangor,	Northampton,	The Bangor W. Co.,	----	----	1	----	----	1	600,000a	200,000a	800,000a	------
Roseto,												
Blooming Grove,	Pike, Blooming Grove Twp.,	The Blooming Grove Park Club (private)	----	----	----	----	----	----	16,000b	----------	16,000b	------
Buck Hill Falls,	Monroe, Barrett Twp.,	Buck Hill W. Co.,	1	----	----	----	----	1	67,500	7,500	75,000	75t
Bushkill,	Pike, Lehman Twp.,	Bushkill W. Co.,	----	1	----	1	----	----	5,000a	----------	5,000a	------
Delaware Water Gap,	Monroe,	Delaware Water Gap W. S. Co.,	----	----	1	----	----	1	6,000b	----------	6,000b	------
Dingman's Ferry,	Pike, Delaware Twp.,	Dingman's Ferry W. Co.,	1	----	----	1	----	----	42,000a	----------	42,000a	------
East Bangor,	Northampton,	Municipal,	1	----	----	1	----	----	280,000a	120,000a	400,000a	------
Easton,	Northampton,	Lehigh W. Co.,	----	----	1	----	----	1	----------	----------	2,600,000	163t
West Easton,												
Wilson Twp. (part),		The South Easton W. Co.,	----	1	----	----	----	1	190,000	110,000	300,000	87t
East Stroudsburg,	Monroe,	Municipal,	----	----	1	----	----	1	350,000a	150,000a	500,000a	------
Hawley,	Wayne,	Hawley W. Co.,	----	----	1	1	----	----	45,000b	10,000b	55,000b	------
Honesdale,	Wayne,	Honesdale Cons. W. Co.,	1	----	----	1	----	----	90,000b	----------	90,000b	------
Seelyville,	Wayne, Texas Twp.,								72,000b	----------	72,000b	------
Matamoras,	Pike,	Matamoras Citizens W. Co.,	----	1	----	----	1	----	15,000a	----------	15,000a	------
Milford,	Pike,	Milford W. Co.,	----	1	----	1	----	----	27,000b	----------	27,000b	------
Mt. Pocono,	Monroe, Coolbaugh Twp.,	Fairview W. Co.,	----	1	----	----	1	----	88,000	----------	88,000	59d
Mountain Home,	Monroe, Barrett Twp.,	Mountain Home W. Co.,	----	1	----	----	1	----	2,300	2,200	4,500	45t
Pompeii,	Northampton, Plainfield Twp., Washington Twp.	Plainfield W. Co., Pompeii W. Co.	----	1	----	1	----	----	14,000	16,000	30,000	67t
Portland,	Northampton,	Portland W. Co.,	1	----	----	1	----	----	12,000b	25,000a	37,000b	------
Shawnee,	Monroe, Smithfield Twp.,	Shawnee W. Co.,	----	1	----	1	----	----	7,500b	----------	7,500b	------
		Manwalamink W. Co.,	1	----	----	1	----	----	60,000a	----------	60,000a	------

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 1—Continued

Place	County	Ownership or Control	Supply						Consumption (average daily)			
			Source			Method						
			Surf.	Ground	Comb.	Grav.	Pumped	Comb.	Domestic (gals.)	Industrial (gals.)	Total (gals.)	Per capita (gals.)
Spruce Cabin Inn,	Monroe, Barrett Twp.,	Canadensis W. Co.,	----	1	----	1	----	----	3,000a	----	3,000a	----
Stroudsburg,	Monroe,	Stroudsburg W. Supply Co.,	----	----	1	----	----	1	666,000a	334,000a	1,000,000a	----
Swiftwater,	Monroe, Pocono Twp.,	Swiftwater Water & Power Co.,	1	----	----	----	1	----	5,000b	----	5,000b	----
Waymart,	Wayne,	Waymart W. Co.,	----	1	----	1	----	----	6,300b	5,000a	11,300b	----

aEstimated by water companies
bEstimated by Water Supply Commission
dDomestic
tTotal

RAILROAD WATER SUPPLIES—SECTION NO 1

DELAWARE, LACKAWANNA & WESTERN

Station	Source of Supply	Method of supply	Average daily consumption gallons	
			Railroad	Public
Scranton Division				
Analomink (stone crusher),	Creek,	Pumped,	123,000	
Cresco,	Brook,	Gravity,	86,000	
Gravel Place,	Drilled well,	Pumped,	31,000	
Henryville,	Spring,	Gravity,	150	
Mt. Pocono,	Fairview W. Co.,			700
Paradise,	Brook,	Gravity,	88,600	
Portland,	Portland W. Co.,			17,000
Slateford,	Portland W. Co.,			130
Stroudsburg,	Stroudsburg W. Co.,			104,000
Water Gap,	Private system,			200
Bangor & Portland Division				
Bangor,	Bangor W. Co.,			70
Belfast Jct.,	Well,	Pumped,		
Flicksville,	Well,	Pumped,		
Johnsonville,	Cistern,	Pumped,		
East Bangor,	Municipal works,			
Mount Bethel,	Cistern,	Pumped,		
Nazareth,	Blue Mt. Cons. W. Co.,			14,000
Pen Argyl,	Blue Mt. Cons. W. Co.,			10,000
	Brook,	Gravity,		
Portland,	Portland W. Co.,			8,500

ERIE

Delaware Division				
Lackawaxen,	Delaware River,	Pumped,	300,000	
Parkers Glen,	Big Pond Brook,	Gravity,	100,000	
Wyoming Division				
Clemo,	Middle Creek,	Pumped,	75,000	
East Honesdale,	Honesdale Cons. W. Co.,			
Glen Eyre,	Blooming Grove Creek,	Pumped, Gravity,	70,000	
Jackson (East Lake Jct.),	Springs,	Gravity,	200,000	
Saco,	Stream,	Pumped,	150,000	
West Hawley,	Lackawaxen River,	Pumped,	100,000	
	Middle Creek,	Gravity,		
	Hawley W. Co.,			
Wimmers,	Stream,	Pumped,	150,000	

WILKES-BARRE & EASTERN

Pocono Summit,	Well,	Pumped,	40,000	
Rinkers,	Stream,	Gravity,	22,000	
Stroudsburg Shop,	Stroudsburg W. S. Co.,			130,000

CENTRAL RAILROAD OF NEW JERSEY

Easton,	Lehigh W. Co.,			105,000

DELAWARE & HUDSON

Penna. Division				
Honesdale,	Honesdale Cons. W. Co.,			5,000
Waymart,	Waymart W. Co.,			5,000

RAILROAD WATER SUPPLIES—Continued

NEW YORK, ONTARIO & WESTERN

Station	Source of Supply	Method of supply	Average daily consumption gallons	
			Railroad	Public
Preston Park,	Creek,	Gravity,	60,000	

DELAWARE VALLEY

East Stroudsburg,	East Stroudsburg W. Co.,			

LEHIGH & NEW ENGLAND

Horn Springs,	Spring,	Gravity,	12,000	
Johnsonville,	Run,	Gravity,	6,300	
Martins Creek,	Alpha Portland Cement Co.		24,900	
Nazareth,	Blue Mt. Cons. W. Co.,			33,000
Pen Argyl,	Blue Mt. Cons. W. Co.,			80,000
Saylorsburg,	Spring Run,	Gravity,	3,100	
Totals,			1,641,750	512,600

INDUSTRIAL WATER SUPPLIES, SECTION NO. 1—(MISCELLANEOUS COMPANIES)

Does not Include all the Smaller Companies

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product	Ret'd to stream (%)	Increase in temp. °F.
				Domestic	Industrial			
Bangor, Northampton Co.	Albion Slate Co.,	Spring,	Pumped,		s(30,000)	8,000 lbs.	0	0
	Bangor Regal Slate Co.,	Pompeii W. Co.,			s(10,000)	925 sq. ft.	0	0
	Hercules Slate Co.,	Blue Mt. Cons. W. Co.,			s(7,000)			
	Hammann Slate Co.,	Quarry, Bangor W. Co.,	Pumped,		(400) rubbing beds (40,000)	105 sq. ft.	0	0
	The Alpha Slate Mfg. Co.,	Blue Mt. Cons. W. Co.,			(15,000) (steam and beds)	1,000 sq. ft.		
Easton City, Northampton Co.	Ingersoll-Rand Co.,	Springs,	Pumped from pond		c200,000			
		Lehigh W. Co.,			s(40,000)		80	slight
	Northampton Hard-bein Slate Co.	Small run,	Pumped,		s5,400	564 tons	0	0
	Thos. Whitesell & Co. (slate)	Small run,	Pumped,		s3,200	188 tons	0	0
East Stroudsburg, Monroe Co.	Elk Tanning Co.,	Starbirds Run, Springs, Drilled wells,			150,000			
Martins Creek, Northampton Co.	Alpha Portland Cement Co.	Delaware River,	Pumped,		5,000,000	8,560 bbls.	90	30
Nazareth, Northampton Co.	Phoenix Portland Cement Co.	Blue Mt. Cons. W. Co.,			s(13,700)	1,412 bbls.	0	0
	Pennsylvania Cement Co.,	Little Monocacy Creek, wells and quarry	Pumped, gravity to pond		3,975,000	3,000 bbls.	90	Yes
	Nazareth Cement Co.,	Blue Mt. Cons. W. Co.,			s(327,000)	2,740 bbls.	0	0
Pen Argyl, Northampton Co.	Jackson-Bangor Slate Co.,	Blue Mt. Cons. W. Co.,			s(25,000)	68 sq. ft. 22 squares	0	0
	The Excelsior Slate Co.,	Blue Mt. Cons. W. Co.,			(7,500)	1,585 sq. ft.	0	0
Penn Allen, Northampton Co.	Penn-Allen Cement Co.,	Drilled wells,	Pumped,		400,000	2,100 bbls.	0	0

INDUSTRIAL WATER SUPPLIES, SECTION NO. 1—(MISCELLANEOUS COMPANIES)—Continued.

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product	Ret'd to stream (%)	Increase in temp. °F.
				Domestic	Industrial			
Parsons, Northampton Co.	The General Crushed Stone Co.	Drilled well,	Pumped,		s21,900	1,200 tons	0	0
Tatamy, Northampton Co.	Messinger Mfg. Co.,	See Tatamy borough, Section No. 1		900b (30 pop.)				
White Mills, Wayne Co.	C. Dorflinger & Sons, Inc., Glassware	Four acre pond,	Gravity,		25,000		25	10
Wind Gap, Northampton Co.	Phoenix Slate Co.,	Blue Mt. Cons. W. Co.,			s(1,000)			
Total from private systems,				900	9,810,500			

sWater for steam purposes
cWater for cooling or condensing purposes

BANGOR AND ROSETO BOROUGHS, NORTHAMPTON COUNTY

THE BANGOR WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Bangor,	5,369	1,263	6,000a
Roseto,	-----	(Incorporated 1912)	1,250b

LOCATION

Boroughs about 1 mile apart in northern Northampton County, on Martins Creek, at foot of Blue Mountain. Range of elevation in built-up portion of Bangor, 470 to 774.

INDUSTRIES

Slate quarrying; three silk mills.

WATER SUPPLY

The Bangor Water Co., incorporated 1884 for Bangor, leased Roseto Water Co., incorporated 1913 for Roseto Village, which owned distributing system.

SOURCES AND COLLECTION

(1) Handelong Springs, about 3 miles north of borough, feeding Handelong Reservoir, capacity 1,000,000 gallons, at elevation 863, or about 300 feet above business section. Drilled well No. 2 under construction just north of reservoir.

(2) LaBar and Stofflet runs; intake about 1 mile north of Handelong Reservoir and joined to it by 8-inch main, 6,400 feet long; watershed area 0.4 square mile.

(3) Pritchard and Betz springs, about 1½ miles north of Handelong Reservoir. A 12-inch gravity main, 6,400 feet long, joins 8-inch main from Stofflet and LaBar runs. Drilled well No. 3, near intake under construction.

(4) Muffley Spring, intake about 0.5 mile south of Handelong Reservoir. A 6-inch gravity main, 6,000 feet long, leads to 6-inch main from Handelong Reservoir. All water very soft.

(5) West Fork Creek; 2,000,000-gallon storage reservoir about 1,000 feet north of Handelong Reservoir not used at present; watershed area, 1.5 square miles.

DISTRIBUTION

By gravity through 8-inch main from Handelong Reservoir, reducing to 6-inch, direct to Bangor. A 6-inch gravity main, 11,350 feet long, leads from Handelong Reservoir to 1,500,000-gallon distributing reservoir in Roseto, at elevation 770, which has 6-inch main to Bangor. The 6-inch main from Handelong Reservoir is joined by 6-inch from Muffley Springs intake and near Roseto Reservoir an 8-inch branch leads west 7,090 feet to 380,000-gallon standpipe, at elevation 799, which is used for higher parts of district. Pressures, 15 to 130 pounds, with average of 110 in Bangor. Distributing mains as follows:

Size (inches),	14	12	10	8	6	4	3 & smaller	Total
Length (miles),	0.1	1.2	1.0	3.5	11.3	3.2	0.6	20.9
Per cent.,	--------	6	5	17	54	15	3	100

Thirty-four hydrants, 6-inch.

CONSUMPTION

Supply to 6,000 people through 1,000 taps, 42 metered, principally industrial. Stated average daily consumption, 800,000 gallons, 75% domestic and 25% industrial. No means of measurement.

BLOOMING GROVE (BLOOMING GROVE TWP.), PIKE COUNTY

PRIVATE SUPPLY

LOCATION

In Palmyra, Lackawaxen, Blooming Grove, Green and Porter townships. The Blooming Grove Park Hunting and Fishing Club, reached by stage from Glen Eyre, about 8 miles north on Erie R. R.

WATER SUPPLY

Water pumped from Lake Giles, by 75,000-gallon pump and forced through 2-inch main into two tanks of 17,000 and 12,000 gallons capacity, respectively, back of club buildings. Average daily consumption, 16,000 gallons; 182 people.

HISTORICAL

The Pike County Water Supply Co. was incorporated September 24, 1901, for the purpose of supplying the club house of the Blooming Grove Park Association. It is reported that this charter has expired by statute of limitations.

BUCK HILL FALLS (BARRETT TWP.), MONROE COUNTY

BUCK HILL WATER COMPANY

Estimated summer population, 800

LOCATION

Northwestern Monroe County, Barrett Township, on Buck Hill Branch of Brodheads Creek.

INDUSTRIES

Summer resort.

WATER SUPPLY

Buck Hill Water Co., incorporated 1902 for Barrett Township, operating only during summer season.

SOURCE AND COLLECTION

(1) Buck Hill Creek; intake 3 miles north of village; watershed area, about 4 square miles. An 8-inch gravity main leads to 50,000-gallon distributing reservoir 0.75 mile west of village. Hypochlorite introduced at intake. Water soft.

(2) Auxiliary supply from Buck Hill Creek, pumping station 1 mile northwest of village; minimum flow of creek, 2,700,000 gallons daily. Company owns watershed for 2 miles above intake; water pumped to distributing reservoir. Pumping equipment consists of 125,000-gallon triplex pump driven by Pelton water wheel, and auxiliary 5-hp. gasoline engine.

DISTRIBUTION

By gravity through 6-inch and 5-inch mains. Pressures, 10 to 140 pounds. Distributing mains, 2.6 miles, 1-inch to 6-inch, 37% 2-inch; 24 fire hydrants, 90% 1½-inch, 10% 3-inch.

CONSUMPTION

Supply to 1,000 people; 150 taps. Average daily consumption, 75,000 gallons, 90% domestic, 10% industrial; measured by pump displacement. Winter consumption very small.

BUSKHILL (LEHMAN TWP.), PIKE COUNTY

BUSHKILL WATER COMPANY

Estimated population 1915, 300a
(600 in summer)

LOCATION

Extreme southern Pike County, Lehman Township, along north bank of Bushkill Creek, at mouth of Little Bushkill Creek, 0.5 mile from Delaware River. Terminus of Delaware Valley R. R.

INDUSTRIES

Summer resort, hotels and boarding houses; grist and saw mill.

WATER SUPPLY

Bushkill Water Co., incorporated 1908 for Lehman Township; in operation since 1893.

SOURCE AND COLLECTION

Two springs in valley of Little Bushkill Creek, 0.75 mile and 2 miles north of village. A 15,000-gallon collecting reservoir at first spring, 150 feet above lower portion of village, is connected by 3-inch pipe to first spring and 2½-inch pipe, 7,000 feet long, to second spring.

DISTRIBUTION

By gravity through 3-inch pipe with blow-off valve at Bushkill Creek in village.

CONSUMPTION

Supply to 50 people. Stated consumption, 2,000 gallons daily in winter and 5,000 in summer. No means of measurement.

DELAWARE WATER GAP BOROUGH, MONROE COUNTY

PRIVATE SUPPLY

Population 1910 census, 446; decrease since 1900, 23. Estimated 1915, 450a.

LOCATION

Western Monroe County, on Delaware River, at gap through Blue Mountain; on Delaware, Lackawanna & Western R. R. and Stroudsburg, Water Gap & Portland Ry.

INDUSTRIES

Four summer hotels, and a number of summer boarding houses.

WATER SUPPLY

Private supply of D. D. Drake, known as Delaware Water Gap Water Supply Company, unincorporated.

SOURCE AND COLLECTION

Caldeno Creek, south of borough, rising in number of springs on north side of Blue Ridge. In dry seasons water pumped electrically from 2-inch drilled well, 150 feet deep, for auxiliary supply. Water soft.

DISTRIBUTION

By gravity from small reservoir and by pumping from well. About 1 mile of mains, 2-inch to 6-inch; 7 fire hydrants, 6-inch.

CONSUMPTION

Supply to 200 people; 97 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 6,000 gallons daily, all domestic.

DINGMAN'S FERRY VILLAGE (DELAWARE TWP.), PIKE COUNTY

DINGMANS FERRY WATER COMPANY

Estimated 1915 population, 150a (700 in summer).

LOCATION

Southeastern Pike County, Delaware Township, along Delaware River, at mouth of Dingmans Creek, 14 miles north of Bushkill, the nearest railroad station.

INDUSTRIES

Summer resort, hotels and boarding houses.

WATER SUPPLY

Dingmans Ferry Water Co., incorporated 1909 for Delaware Township.

SOURCE AND COLLECTION

Dingmans Creek; small intake 1.25 miles west of village, at elevation 100 feet higher.

DISTRIBUTION

By gravity through 6-inch main, 6,620 feet long with 3,490 feet of 4-inch laterals. No fire hydrants.

CONSUMPTION

Supply to 150 people, increased to 700 in summer; 39 taps. Stated consumption, 9,000 gallons daily in winter and 42,000 in summer. No means of measurement.

EAST BANGOR BOROUGH, NORTHAMPTON COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,186; increase since 1900, 203. Estimated 1915, 1,400a

LOCATION

Northeastern Northampton County, on Martins Creek, 1 mile east of Bangor Borough, on Delaware, Lackawanna & Western R. R. and Bangor and Portland Traction Co.

INDUSTRIES

Quarrying and splitting of slate.

WATER SUPPLY

Municipal plant built in 1902.

SOURCE AND COLLECTION

East Fork of Martins Creek; storage reservoir near headwaters on Northampton-Monroe county line, 4.5 miles north of borough. Water soft and of excellent quality.

DISTRIBUTION

By gravity through 8-inch main from storage reservoir to distributing reservoir in borough; pressures, 59 to 145 pounds; 5.9 miles distributing mains, 2-inch to 8-inch, 60% 8-inch; 17 fire hydrants, 6-inch.

CONSUMPTION

Supply to 800 people; 155 taps. Stated consumption, 400,000 galloons daily, 70% domestic, 30% industrial. No means of measurement.

COST AND REVENUE

Total cost of works, $30,640; annual operating expenses (1913), $468; gross revenue (1913), $2,758.

EASTON CITY, WEST EASTON BOROUGH, NORTHAMPTON COUNTY

LEHIGH WATER COMPANY

THE SOUTH EASTON WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Easton	28,523	3,285	30,206x
West Easton,	1,033	33	1,206b

LOCATION

Eastern Northampton County, at junction of Lehigh River with Delaware River, on Lehigh Valley R. R., Central R. R. of New Jersey, Northampton Traction Co. and Easton Transit Co. Parts of city on each side of Lehigh River and Bushkill Creek.

INDUSTRIES

Near center of cement industry; structural works, foundries, stove works, two machine shops, two iron and steel companies, air compressor and mining machinery works, four silk mills, knitting mill, paint works and large repair shops of Lehigh Valley R. R. Seat of Lafayette University.

WATER SUPPLY

Lehigh Water Co., incorporated 1860 from West Ward Water Co., incorporated 1854 for Easton. Owns majority of stock of Easton Water Co., incorporated 1817 for Easton. Lehigh Water Co. supplies Easton north of Lehigh River, part of West Easton Borough, and part of Wilson Township. Easton Water Co. supplies a small part of residential district in Easton; also north of river.

The South Easton Water Co., incorporated 1886 for South Easton Borough, now part of city, supplies city south of Lehigh River, also part of West Easton Borough and Palmer and Wilson townships, under charters of West Easton Water Co. and Palmer Township Water Co., incorporated 1910. This part of supply now under development; small section of Glendon Borough, south of city, supplied by petition.

EASTON WATER COMPANY

SOURCE AND COLLECTION

Six springs, from limestone rock in northern limits of city at elevation 210 feet, city datum; a 3-inch main from springs through central part of city, ending in three cisterns, capacity 11,000 gallons, on hillside near Sixth Street above Northampton Street. Water medium hard.

Sixty-six consumers. No means of measuring consumption; assuming 30 gallons per capita, would be 9,000 gallons daily; entire flow of springs utilized.

LEHIGH WATER COMPANY

SOURCE AND COLLECTION

Submerged filter crib in Delaware River, opposite High Street, with 18-inch and 2-inch pipe lines to pumping station. Water treated with hypochlorite of lime at pump suctions. Main pumping station contains one 2,000,000-gallon Worthington compound pump, one 2,000,000-gallon Corliss engine pump, and one 1,500,000-gallon motor driven vertical pump. One gas producer and engine being erected to drive 4,000,000-gallon vertical pump. Water pumped through 20-inch main 3,800 feet to 7,000,000-gallon Chestnut Hill Reservoir on northeastern outskirts of city, about 285 feet above city datum on Delaware River. Water slightly hard.

DISTRIBUTION

(1) A district between Lehigh River and Bushkill Creek west to about Fifth Street, average elevation 40 feet, a residential section north of Bushkill Creek, average elevation 170 feet, and a section west to Fifteenth Street and south of Elm Street at somewhat lower elevation, supplied by two 16-inch mains from Chestnut Hill Reservoir which terminate in 4,000,000-gallon reservoir in western part of city 2.5 miles from and 40 feet lower than Chestnut Hill Reservoir. Pressures, 20 to 120 pounds. Elevations refer to city datum.

(2) A district west of Fifteenth Street and north of Elm Street, supplied from 500,000-gallon standpipe, 125 feet high on western reservoir grounds. Water pumped from reservoir to standpipe by two 1,000,000-gallon pumps, belt-connected to gas engine and electric motor. Pressures, 35 to 60 ponds. Distributing mains as follows:

Size (inches),	24	20	16	12	10	8	6	4	3 & smaller	Total
Length (miles),	0.1	1.5	3.6	6.3	0.8	0.7	18.0	2.7	2.7	36.4
Per cent.,	------	4	10	17	2	2	50	7½	7½	100

Two hundred and eight fire hydrants, 9% 6-inch, 91% 4-inch.

CONSUMPTION

Supply to 16,000 people; 3,562 taps, 11.6% metered. Stated average daily consumption, 2,600,000 gallons, measured by pump displacement; of this the western district uses about 150,000 gallons daily. Besides those supplied by South Easton Water Co. (q. v.), a considerable population of city obtain supply from cisterns and roof water.

THE SOUTH EASTON WATER COMPANY

SOURCE AND COLLECTION

(1) Three drilled wells in central part of city near south bank of Lehigh River, one being shallow, with little yield; main supply from other two, which are 80 and 350 feet deep. Combined yield of latter two by test, 1,220,000 gallons daily. Water pumped into distributing mains by two 864,000-gallon Aldrich pumps, direct connected to electric motors.

(2) Several springs 1 mile south of city feeding 750,000-gallon reservoir, 250 feet above pumping station in city.

DISTRIBUTION

By pumping direct to distributing system with spring reservoir as equalizer. A 12-inch main leads under river from Glendon Borough to Palmer Township, where 500,000-gallon standpipe, 50 feet diameter and 85 feet high, is under construction, and will act as equalizer and additional storage. Distributing mains as follows:

Size (inches),	20	12	8	6	4	Total
Length (miles),	0.1	3.5	2.7	7.5	2.1	15.9
Per cent.,	1	22	17	47	13	100.0

Seventy-three fire hydrants in South Easton, 5 in Palmer and Wilson townships, 10 in West Easton.

CONSUMPTION

Supply to 3,450 people; 700 taps in South Easton, 74 in Palmer and Wilson townships and 30 in West Easton. Stated average daily consumption, 300,000 gallons; 190,000 gallons domestic, 110,000 gallons industrial; measured by pump displacement.

EAST STROUDSBURG BOROUGH, MONROE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 3,330; increase since 1900, 683. Estimated 1915, 4,400a.

LOCATION

Eastern Monroe County, on east bank of Brodheads Creek, opposite Stroudsburg Borough, on main line Delaware, Lackawanna & Western R. R. Built-up portion on ground sloping toward creek, with 100-foot range in elevation.

INDUSTRIES

Boiler works, silk mills, glass works, metal works, piano stool factory, tannery; State Normal School.

WATER SUPPLY

Municipal works built 1890.

SOURCE AND COLLECTION

Water from two sources: (1) Sambo Creek, (2) Fable Spring Run and two adjacent drilled wells.

(1) Sambo Creek, 2.75 miles north of center of borough, 435,000-gallon intake; watershed area, 1,706 acres; borough owns 40 acres near intake and 70 acres 1 mile above. Water treated at intake by hypochlorite; temporary plant; permanent purification plant to be installed later. Water soft.

(2) Fable Spring Run and two adjacent drilled wells, 1 mile north of borough and 600 feet east of Brodheads Creek; one 8-inch well, 140 feet deep, capacity 86,000 gallons per day; second 8-inch well, 202 feet deep, capacity 60,000 gallons per day.

Water from Fable Spring Run flows into collecting basin, into which is also pumped water from one well by 86,400-gallon Deane pump; other well not used. Pumping station contains 1,000,000-gallon Knowles steam pump and 500,000-gallon DeLaval centrifugal pump as auxiliary. Water taken through 8-inch suctions and discharged through 4-inch and 6-inch mains which unite 1,200 feet be-

yond into 6-inch main connecting with main from Sambo Creek; 0.5 mile from pumping station and about 1.4 miles south of Sambo Creek reservoir. Water soft.

Preparations under way for constructing new reservoir, capacity 27,000,000 gallons, on Sandy Creek about 1 mile above present intake; wells to be abandoned.

DISTRIBUTION

By gravity from Sambo Creek, through 10-inch main which receives 6-inch force main from Fable Spring Run. Pressure, 30 to 80 pounds; distributing mains as follows:

Size (inches),	10	8	6	4	2 & smaller	Total
Length (miles),	1.9	0.5	4.0	4.6	0.5	11.5
Per cent.,	17	4	35	40	4	100

Sixty-four fire hydrants, 5-inch.

CONSUMPTION

Supply to 4,200 people; 726 taps. Stated consumption, 500,000 gallons daily; 70% domestic, 30% industrial. No means of measurement.

Industrial plants have private supplies for manufacturing purposes, but use public supply for domestic purposes. Largest users are metered, there being 31 meters, or 28% of consumption. Average daily consumption for 1913 of principal industrial users as follows:

	Gallons
Delaware, Lackawanna & Western R. R.,	123,000
International Boiler Works,	2,000
Yetter Building & Cold Storage,	4,000
Fenner Hotel,	3,800
Metal Crafters,	1,300
White-Hall Tatum Co.,	900
Total,	135,000

State Normal School has 40,000-gallon storage tank and booster pump on 6-inch line to institution. Forty dwellings in borough have individual sources of supply.

COST AND REVENUE

Total cost of works, $90,992; annual operating expenses (about), $3,500; annual revenue (about), $9,300.

HAWLEY BOROUGH, WAYNE COUNTY

HAWLEY WATER COMPANY

Population 1910 census, 2,018, increase since 1900, 93. Estimated 1915, 2,500a.

LOCATION

Southeastern Wayne County, at junction of Wallenpaupack Creek with Lackawaxen River; on Erie R. R. Built-up section very hilly; range of elevation 175 feet.

INDUSTRIES

Cut glass factory, glass factories and silk mill.

WATER SUPPLY

Hawley Water Co., incorporated 1888 for Hawley Borough.

SOURCE AND COLLECTION

From four sources:

Name	Location	Capacity of reservoir
1. Company Spring,	0.5 mile north of boro,	30,000 gallons
2. Pike County Spring,	0.5 mile south of boro,	45,000 gallons
3. Sheridan Springs (5),	0.5 mile west of boro,	28,000 gallons
4. Small Spring Run,	2 miles northwest of boro,	Small pond

Water medium hard.

DISTRIBUTION

By gravity to separate parts of borough as follows:

Supplies	Pressure	Pipe Line
From 1. North of river,	60 lbs.	4-inch }
From 2. Southeastern part,	75 lbs.	4-inch } 2.5 miles
From 3. Western part,	30 lbs.	4-inch }
From 4. Fire purposes,	60 lbs.	8-inch, 2.5 miles

There are 3 miles of distributing mains, 3-inch to 6-inch; 21 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,500 people; 400 taps, 10 industrial. No means of measuring consumption; assuming 30 gallons per capita, would be 45,000 gallons daily.

HONESDALE BOROUGH AND SEELEYVILLE VILLAGE (TEXAS TWP.), WAYNE COUNTY

HONESDALE CONSOLIDATED WATER COMPANY

Population 1910 census, 2,945; increase since 1900, 81. Estimated 1915, 3,000b. Estimated 1915 (Seeleyville) 2,400b.

LOCATION

County seat in Central Wayne County on Lackawaxen River at mouth of Dyberry Creek; on Erie and Delaware & Hudson railroads. Seeleysville 1 mile west of borough.

INDUSTRIES

Agriculture; cut glass manufacturing plant.

WATER SUPPLY

Honesdale Consolidated Water Co., incorporated 1905 by merger of following companies:

Name	Inc.	Incorporated for
Consumers Water Co. of Honesdale,	1902	Honesdale borough
Honesdale Water Co. (The),	1850	Honesdale
Wayne Citizens Water & Supply Co.,	1899	Wayne and Pike counties

Works built in 1863 by one of original companies.

SOURCE AND COLLECTION

(1) Glass Ponds, Nos. 1, 2 and 3, from 4 to 6 miles northwest of borough; no surface inlets, and supplied entirely by springs. Discharge from second pond flows directly into first; discharge from third pond connected to second by 6-inch pipe. A 12-inch gravity main from pond No. 1 to 500,000 gallon distributing reservoir on hill just northwest of borough.

(2) Auxiliary from Cadjaw Pond 1 mile south of borough, no surface inlet, and supplied entirely by springs. A 12-inch gravity main leads to distributing reservoir. Water soft.

DISTRIBUTION

By gravity through 8 and 6-inch mains. Pressures 48 to 50 pounds. Total mains as follows:

Size (inches),	14	12	10	8	6	4	3 & smaller	Total
Length (miles),	0.1	3.9	2.3	2.0	3.8	2.7	2.8	17.6
Per cent.,	--------	22	13	11	22	16	16	100

Fifty fire hydrants, 43% 6-inch, 7% 4-inch. Water soft.

CONSUMPTION

Supply to 3,000 people in Honesdale and 2,400 people in Texas Township, principally Seeleyville; 1,200 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 162,000 gallons daily.

MATAMORAS BOROUGH, PIKE COUNTY

MATAMORAS CITIZENS WATER COMPANY

Population 1910 census, 1,388 (incorporated 1905). Estimated 1915 population, 1,800a.

LOCATION

Extreme eastern point of Pike County, on western bank of Delaware River, opposite Port Jervis, N. Y.

INDUSTRIES

Residential suburb of Port Jarvis.

WATER SUPPLY

Matamoras Citizens Water Co., incorporated 1903 for township of Westfall, supplying since 1910.

SOURCE AND COLLECTION

Eight-inch drilled well 208 feet deep on flat land northwest of borough about 100 feet west of Drillers Brook; cased through sand and gravel for 18 feet and remainder of depth shale rock. Test yielded continuously for 24 hours 125 to 130 gallons per minute, which was maximum capacity of testing pump. Water raised into covered concrete reservoir on hill immediately west of borough and 150 feet above it. Pumping equipment consists of 130 g. p. m. pump, 35 hp. gasoline engine and 20 hp. engine and boiler.

DISTRIBUTION

By gravity through 10-inch main; pressures 60 to 70 pounds; distributing mains 5.2 miles, 2-inch to 10-inch, 55% 4-inch; 50 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,000 people, 185 taps. Stated average consumption, 15,000 gallons daily, all domestic. No means of measurement.

MILFORD BOROUGH, PIKE COUNTY

MILFORD WATER COMPANY

Population 1910 census, 872; decrease since 1900, 12. Estimated 1915, 900a.

LOCATION

County seat, in eastern Pike County, along Delaware River at mouth of Sawkill; reached by stage from Port Jervis, N. Y., 6 miles north. Principally summering place with population increased during season to about 1,500.

WATER SUPPLY

Milford Water Co., incorporated May 20, 1873.

SOURCE AND COLLECTION

Constantly flowing spring called Cold Spring, 1 mile northwest of center of borough, forming source of small tributary of Sawkill. Small impounding reservoir just below spring, about 170 feet above borough. Water soft.

DISTRIBUTION

By gravity through 8-inch main. Pressures 65 to 70 pounds. There are 3-miles of distributing mains, 4-inch to 8-inch; 42 fire hydrants, 3½-inch.

CONSUMPTION

Supply to 900 people; 305 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 27,000 gallons daily, all domestic.

MOUNTAIN HOME (BARRETT TWP.), MONROE COUNTY

MOUNTAIN HOME WATER COMPANY

Estimated 1915 population, 150b.

LOCATION

Northern Monroe County, Barrett Township, on Rattlesnake Creek, tributary of Brodheads Creek, in Pocono Mountains. Summer resort.

WATER SUPPLY

Mountain Home Water Co., incorporated 1900 for part of Barrett Township.

SOURCE AND COLLECTION

Spring in northern part of village, water pumped directly into mains by 5,000-gallon pump operated by water power. Water power generated by overshot wheel (11 ft. by 28 in.), water from two other springs races providing head of 13 feet. Water soft.

DISTRIBUTION

By pumping into system, surplus water flows into 6,000 gallon reservoir on hill south of village.

CONSUMPTION

Supply 100 people; 20 taps. Average summer consumption 4,500 gallons daily, 50% domestic; measured by contents of reservoir when not pumping. Supplies St. Luke's Home.

MT. POCONO (COOLBAUGH TWP.), MONROE COUNTY

FAIRVIEW WATER COMPANY

Estimated 1915 population, 300a (in summer, 1,500).

LOCATION

Northern central Monroe County, Coolbaugh Township, at headwaters of Holler Creek, tributary of Brodheads Creek, in Pocono Mountains; on Delaware, Lackawanna & Western R. R.

INDUSTRIES

Summer hotels and boarding houses.

WATER SUPPLY

Fairview Water Co., incorporated 1900 as Fairview Water Supply Co. and reorganized after judicial sale in 1906. Most of larger hotels have private systems.

SOURCE AND COLLECTION

Pumping station at Wilson and Whisky Springs, 0.75 mile east of north end of village; two Rief hydraulic rams, two Gould triplex pumps, 8 and 15 hp. gasoline engines, smaller used for emergencies. Rams operated by overflow water from spring. Capacity of works limited by pumping plant to 100,000 gallons. Flow of Wilson Spring 216,000 gallons, and of Whisky Spring 114,000 gallons, daily, decreasing 50% in summer. Water soft.

DISTRIBUTION

By pumping directly into mains, excess flowing into 150,000 gallon equalizing reservoir at north end of village; pressures up to 100 pounds; 3.75 miles distributing mains, 1½-inch to 4-inch; no fire hydrants.

CONSUMPTION

Supply to 200 people; 80 metered taps. Average daily consumption, 88,000 gallons in summer, all domestic; measured by pump displacement.

INDUSTRIAL SUPPLIES

Mt. Pocono Spring Water Co. sells water from Wilson Spring in Scranton, using 1 to 5 gallon glass containers.

POMPEII (WASHINGTON TWP.), NORTHAMPTON COUNTY

POMPEII WATER COMPANY—PLAINFIELD WATER COMPANY

Estimated 1915 population, 500b.

LOCATION

Northern Northampton County, at headwaters of tributary of Martins Creek; 2 miles northwest of Bangor and 1 mile northwest of Pen Argyl, nearest railroad station.

INDUSTRIES

Three slate quarries just across township line in Plainfield Township—the Crown, West Bangor and Fidelity—employing 235 men. Freight line of New England & Lehigh R. R. between village and quarries.

WATER SUPPLY

Pompeii Water Co., incorporated 1910 for Washington Township, and Plainfield Water Co., incorporated 1913 to legalize supply for Plainfield Township. Both companies, under one control and management, operate as one system.

SOURCE AND COLLECTION

Two groups of springs known as Point Lookout Springs and Moyers Gap spring; 300 feet apart on southern slope of Big Off-sett mountain of Kittatinny range, 1 mile east of Pen Argyl and 0.75 mile northwest of Pompeii; estimated flow 120,000 gallons daily. Five hundred feet below springs, streams from same converge to join tributary of Martins Creek; 500,000 gallon reservoir at confluence is 250 feet above distributing system.

DISTRIBUTION

By gravity from reservoir through 6-inch main 2,000 feet long to distributing system; pressure about 80 pounds; 2.6 miles distributing mains, 4-inch and 6-inch; no fire hydrants.

CONSUMPTION

Supply to 450 people; 40 taps. Stated daily consumption 30,000 gallons, of which about 16,000 gallons is metered. Industrial supply used in two slate quarries in connection with cutting and planing of stone is about 55,000 gallons.

PORTLAND BOROUGH, NORTHAMPTON COUNTY

PORTLAND WATER COMPANY

Population 1910 census, 649; increase since 1900, 159. Estimated 1915, 700a.

LOCATION

Northeastern Northampton County, on Delaware River at mouth of Jacoby Creek; on Delaware, Lackawanna & Western R. R., Lehigh & New England R. R., Bangor & Portland Traction Co., and Stroudsburg, Water Gap & Portland Ry.

INDUSTRIES

Lumber mill, picture frame factory, shirt factory and a few lime quarries.

WATER SUPPLY

Portland Water Co., incorporated 1904 for Portland Borough. Works completed in 1908.

SOURCE AND COLLECTION

Storage reservoir on Slateford Creek just above village of Slateford, about 3 miles north of borough; watershed area 2 square miles. Water soft.

DISTRIBUTION

By gravity through 8-inch main 0.4 mile long reducing to 6-inch, pressures 75 to 120 pounds; total mains 5 miles, 4-inch to 8-inch, 80% 6-inch; 15 fire hydrants, 4-inch.

CONSUMPTION

Supply to 400 people; 76 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 12,000 gallons daily, all domestic. Furnish 25,000 gallons daily to Delaware, Lackawanna & Western R. R.

SAYLORSBURG (HAMILTON TWP.), MONROE COUNTY

HAMILTON WATER COMPANY

Source of supply in Middle Delaware Sub-basin, Section No. 2, (q. v.).

SHAWNEE (SMITHFIELD TWP.), MONROE COUNTY

SHAWNEE WATER SUPPLY COMPANY

MANWALAMINK WATER COMPANY

Estimated 1915 population, 200b (525 in summer).

LOCATION

Western Monroe County, Smithfield Township, on Delaware River at mouth of Shawnee Creek; nearest railroad station at Delaware Water Gap, 3 miles south.

INDUSTRIES

Summer resort, hotels and boarding houses.

WATER SUPPLY

Shawnee Water Supply Co., incorporated 1907 for Shawnee Village, and operating previously as private system.

Manwalamink Water Co., incorporated 1904 for Smithfield Township.

SHAWNEE WATER SUPPLY CO.

SOURCE AND COLLECTION

Six springs along Shawnee Creek, three of which are being used, 1 mile northwest of borough; water collected in two reservoirs; combined capacity 10,000 gallons.

DISTRIBUTION

By gravity through 2-inch main; pressure 75 pounds; 1.9 miles pipe, ½-inch to 2-inch; 50% 1-inch.

CONSUMPTION

Supply to 75 people in winter and 250 in summer through 25 taps. No means of measuring consumption; assuming 30 gallons per capita, would be from 2,200 to 7,500 gallons daily.

MANWALAMINK WATER COMPANY

SOURCE AND COLLECTION

Buckwood Lake, across Delaware River in State of New Jersey, on property of Rossiter Realty Co. Water soft.

DISTRIBUTION

By gravity through 3-inch pipe; 2 miles mains, 1-inch to 3-inch.

CONSUMPTION

Supplies 100 people on property of Rossiter Realty Co. Stated consumption 60,000 gallons daily, all domestic. No means of measurement. Estimate includes supply to Buckwood Inn, accommodating 175 people in summer.

SPRUCE CABIN INN (BARRETT TWP.), MONROE COUNTY

CANADENSIS WATER COMPANY

Estimated 1915 population, 100a.

LOCATION

Barrett Township, northeastern Monroe County, on Brodheads Creek, 1 mile below Canadensis; nearest railroad station, Mountain Home, 2 miles southwest on Delaware, Lackawanna & Western R. R.

INDUSTRIES

Summer community; one hotel and four or five cottages.

WATER SUPPLY

Canadensis Water Co., incorporated 1903, for Barrett Township.

SOURCE AND COLLECTION

Fifteen hundred and 5,000 gallon reservoirs near springs; one reservoir about 0.33 mile west of hotel, other 0.5 mile east on opposite side of Brodheads Creek. Water soft.

DISTRIBUTION

By gravity through 2-inch pipes; pressures 30 to 50 pounds; 1.25 miles of distributing pipe; 5 fire hydrants, 1½-inch.

CONSUMPTION

Supply to Spruce Cabin Inn and two cottages for domestic use; about 100 people. Stated consumption 3,000 gallons daily, all domestic. No means of measurement.

STROUDSBURG BOROUGH, MONROE COUNTY

STROUDSBURG WATER SUPPLY COMPANY

Population 1910 census, 4,379; increase since 1900, 929. Estimated 1915, 5,000a.

LOCATION

Eastern Monroe County, at junction of McMichaels Creek with Brodheads Creek; on Wilkes-Barre & Eastern R. R., Stroudsburg Passenger Ry. and Stroudsburg, Water Gap & Portland Ry.

INDUSTRIES

Silk and woolen mills, foundries, a tannery and car shops. Several large summer hotels in vicinity.

WATER SUPPLY

Stroudsburg Water Supply, Co., incorporated 1905 for Stroudsburg Borough, operates by lease Stroudsburg Water Co., incorpo-

rated 1876 for Stroudsburg, and Monroe County Water Supply Co., incorporated 1899 for Monroe County. Works built by Stroudsburg Water Co. in 1876.

SOURCE AND COLLECTION

(1) Stokes Mill springs, near Brodheads Creek, on west side, 2.5 miles north of borough; auxiliary supply from intake on Brodheads Creek, near springs. On east side of creek, at intake, is water power installation consisting of two turbines capacities 54 and 28 hp. pumping water from intake and receiving basin of spring directly into main. The 54 hp. turbine delivers 1,000,000 gallons daily and 28 hp. 500,000 gallons daily.

(2) Flagler Creek; reservoir about 2 miles northwest of borough; watershed area 4.5 square miles.

(3) Foxton Hill spring, 1 mile southeast of borough, feeding 100,000 gallon reservoir.

DISTRIBUTION

By pumping directly into mains, Flagler Creek and Foxton Hill reservoirs used as equalizers; pressures 30 to 40 pounds.

CONSUMPTION

Supply to 5,000 people; 1,000 taps. Stated average daily consumption 1,000,000 gallons, two-thirds domestic and one-third industrial. No means of measurement; 106,000 gallons daily used by New York, Susquehanna & Western R. R. in western part of borough and 250,000 gallons by Delaware, Lackawanna & Western R. R. at Gravel Place, 2.5 miles northeast of borough.

SWIFTWATER (POCONO TWP.), MONROE COUNTY

SWIFTWATER WATER AND POWER COMPANY

Estimated population, 150b.

LOCATION

Central Monroe County, Pocono Township, on Swiftwater Creek; reached by stage from Mt. Pocono, 2 miles north on Delaware, Lackawanna & Western R. R.

WATER SUPPLY

The Swiftwater Water & Power Co., incorporated 1902 for Swiftwater Village, supplies water to Swiftwater hotel, Dr. Slees' School and also electric light. Water for drinking at these places secured from a spring.

Water pumped from Swiftwater Creek to 18,000 gallon distributing reservoir, east of village, and distributed by gravity.

TATAMY BOROUGH, NORTHAMPTON COUNTY

PRIVATE SUPPLY

Population 1910 census, 512; increase since 1900, 252. Estimated 1915, 600a.

LOCATION

Eastern Northampton County, along Bushkill Creek, about 5 miles northwest of Easton; on Lehigh Valley R. R. and Northampton Traction Co.

INDUSTRIES

Messinger Manufacturing Co.

WATER SUPPLY

Small private system of Messinger Manufacturing Co., installed in 1892; supplying five houses, a hotel and water for fire protection at company's plant.

SOURCE AND COLLECTION

By pumping from Bushkill Creek to reservoir 30 feet. diameter and 12 ft. high and 60 ft. above creek, by a 5-inch by 5-inch plunger pump at company's plant. Water medium hard.

DISTRIBUTION

There are 2,000 feet of pipe and a few fire hydrants 2½-inch; pressure 25 to 30 pounds.

WAYMART BOROUGH, WAYNE COUNTY

WAYMART WATER COMPANY (THE)

Population 1910 census, 412; decrease since 1900, 20. Estimated 1915, 439a.

LOCATION

Western Wayne County at headwaters of Lackawaxen River; on Delaware & Hudson R. R.

INDUSTRIES

Agriculture; residential suburb of Carbondale; knitting mill.

WATER SUPPLY

Waymart Water Co., incorporated 1893 for Waymart Borough.

SOURCE AND COLLECTION

Patterson Spring, rising in meadow land north of borough; estimated minimum flow, 72,000 gallons daily. Water soft.

DISTRIBUTION

By gravity through 6-inch main. About 2 miles distributing mains, 3-inch to 6-inch, 65% 3-inch; one fire hydrant, 3-inch; pressures 12 to 27 pounds.

CONSUMPTION

Supply to 210 people; 51 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 6,300 gallons domestic daily.

Supplies 5,000 gallons daily to Delaware & Hudson R. R.

INDUSTRIAL SUPPLIES

Creamery and knitting mill have private supply from drilled wells.

SECTION No. 2

DELAWARE RIVER

MIDDLE DELAWARE SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

Table of Industrial Water Supplies (Coal Companies)

SECTION No. 2

DELAWARE RIVER, MIDDLE DELAWARE SUB-BASIN

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section is in the southeastern part of the State, south of the Upper Delaware and Lower North Branch Susquehanna sub-basins and north of the Lower Delaware sub-basin. It extends nearly 100 miles north and south, averages about 20 miles in width, has an area of 1,949 square miles, or 4.3% of the State, and is the territory drained by the Delaware River below the mouth of the Lehigh River, and above the mouth of Poquessing Creek, on the boundary between Bucks and Philadelphia counties.

It includes the greater portion of Carbon, Northampton, Lehigh and Bucks counties and small portions of Wayne, Lackawanna, Luzerne, Monroe, Schuylkill, Berks and Montgomery counties.

SURFACE CHARACTERISTICS

The boundary line between Carbon, Monroe, Lehigh and Northampton counties is marked by the southernmost ridges of the Allegheny Mountains. North of this line is a rough mountainous plateau region, while south the country descends to the plain with low hills along the Delaware River, about 400 feet above sea level. The terminal moraine crosses the northern part above the center of Carbon and Monroe counties. The northern half is traversed by the Lehigh River, through which it drains into the Delaware River, while the southerly half drains into the latter through numerous smaller streams. The principal tributaries are the Lehigh River, Tomhicken and Neshaminy creeks.

POPULATION

The population in 1910 was 309,000, being 4% of that of the State, and an increase of over 51,000, or 20% since 1900. The density of population is 171 per square mile, increasing from 113 in Carbon County and 120 in Bucks County to 370 in Lehigh and Northampton

counties. The urban population is about 149,000, or 48%, grouped principally along the Lehigh River, particularly between Catasauqua and the Bethlehems and to a less extent in the coal district to the north and along the Delaware River and railroads approaching Philadelphia.

RESOURCES AND INDUSTRIES

In the northern portion coal mining is the principal industry, the first coal mined in Pennsylvania having been taken out at Mauch Chunk. The central portion has the great steel works of the Bethlehem Steel Co., employing several thousand men, and numerous other smaller but important iron and steel plants. This area is the center of the production of Portland cement of the world, while slate quarries are also an important industry. The southern portion is devoted chiefly to agriculture, with manufacturing along the Delaware River, particularly in the vicinity of Philadelphia.

WATER SUPPLY

This section at present has, generally speaking, sufficient water for its needs in the near future. The district along the Lehigh River, however, from Catasauqua through Allentown and the Bethlehems, is a bustling industrial region, growing rapidly, and with the continuance of such conditions there is a prospect that the local sources, except the Lehigh River, will eventually be inadequate.

The river is already extensively used for water supply for public and industrial purposes. The water works for South Bethlehem and vicinity use 4,500,000 gallons daily from it, and many large industries of which record has been obtained, including the Bethlehem Steel Works (76,000,000 gallons), the Atlas Portland Cement plant at Northampton (49,000,000 gallons), and various others, combined, use about 170,000,000 gallons daily from the main river or tributaries near their point of discharge. While it is claimed that not over 10% of this water is permanently removed, the rest being returned to the river after use, the total taken out is approximately 20,000,000 gallons, a decidedly appreciable quantity at time of minimum flow.

The region to the south in the vicinity of Philadelphia may also ultimately reach the limit to which it is practicable to use nearby sources of supply, and meantime the process of pumping and filtration must be resorted to. The northeasterly portion in Monroe County is sparsely settled and abundant in streams and lakes practically unutilized except for ice ponds.

Springs are also numerous; large limestone springs in the neighborhood of Allentown furnish the entire city supply, amounting to from 7,000,000 to 9,000,000 gallons daily. To the north and south small

springs of soft water are utilized freely. The supplies from underground sources largely outnumber those from surface sources, but they furnish about the same amounts to the public systems, exclusive of the large quantities used for industrial purposes from the Lehigh River. Gravity and pumping are used about equally for delivery of water to the distributing reservoirs, while nearly all distribution is by gravity. Gasoline engines and electric motors are used in several cases for pumping.

There are 14 municipally owned systems in this section, of which Allentown City and Bethlehem Borough are the largest, while 26 systems are operated by incorporated companies. The aggregate population served by water supply systems is more than 230,000. There are three systems of water supply covering several communities, viz: (1) The Clear Springs Water Co. system, in the vicinity of Catasauqua and Northampton, supplying about 20,000 population and having a consumption of about 1,000,000 gallons daily; (2) the system of the Bethlehem City Water Co., supplying 30,000 population in South Bethlehem and neighboring territory on both sides of the Lehigh River and having a consumption of about 4,500,000 gallons daily; (3) the system of the Panther Valley Water Co., supplying about 20,000 population and collieries of the Lehigh Coal and Navigation Co. in and around Lansford and consuming about 4,300,000 gallons daily.

INDUSTRIAL SUPPLIES

Besides the industries above noted, there are numerous others having private supplies from driven wells and springs. The railroads use approximately 7,000,000 gallons per day, of which 5,700,000 is from privately operated systems and the balance from public systems. The Central R. R. of New Jersey and the Philadelphia & Reading Ry. are the largest consumers.

The industrial use of water greatly exceeds the domestic for, aside from a considerable amount of which no record is available, the amounts reported total 208,000,000 gallons industrial as against 21,000,000 domestic.

The amount of industrial supply reported from private plants is 185,000,000 gallons, as against the total of 44,000,000 gallons furnished by public systems. The following tables give a summary of the water supplies in this section, both domestic and industrial, and are followed by detailed descriptions of the water supply systems, arranged alphabetically according to places supplied.

OPERATING PUBLIC WATER SUPPLIES—SECTION NO. 2

Place	County	Ownership or control	Population 1915	Population Supplied	City Company	City Municipal	Borough Company	Borough Municipal	Borough Private	Village Company	Village Private
Allentown,	Lehigh,	Municipal,	65,000	60,000		1					
Langhorne,	Bucks,	Langhorne Spring W. Co.,	3,500	3,500			1				
Langhorne Manor,	Bucks,	Langhorne Spring W. Co.,					—				
South Langhorne,	Bucks,	Langhorne Spring W. Co.,					—				
Bath,	Northampton,	Municipal,	1,500	1,000				1			
Bear Creek,	Luzerne, Bear Creek Twp.,	Private (A. Lewis),	175	125							1
		(Monroe & Lewis),		40							1
Beaver Meadow,	Carbon,	Beaver Meadow W. Co.,	‡								
		Citizens W. Co. of Beaver Meadow,	1,530	1,400			1				
Bethlehem,	Northampton,	Bethlehem W. Co.,	§				(1)				
		Municipal,	14,500	8,000				1			
Bowmanstown,	Carbon,	Private (Maurice Bowman),	900	300					1		
Bristol,	Bucks,	Municipal,	10,200	9,800				1			
Pine Grove,	Bucks,									**	
Catasauqua,	Lehigh,	Municipal (part),	28,000	6,000			(1)	1			
Cementon,	Lehigh, Whitehall Twp.,			20,000						1	
Coplay,	Lehigh,	Clear Springs W. Co.,					1				
East Catasauqua,	Lehigh, Hanover Twp.,									—	
Egypt,	Lehigh, Whitehall Twp.,									—	
Fullerton,	Lehigh, Whitehall Twp.,									—	
Hokendauqua,	Lehigh, Whitehall Twp.,									—	
Northampton,	Northampton,						—				
North Catasauqua,	Northampton,						—				
Siegfried,	Northampton, Allen Twp.,									—	
West Catasauqua,	Lehigh, Whitehall Twp.,									—	
West Coplay,	Lehigh, Whitehall Twp.,									—	
Coaldale,	Schuylkill, Rahn Twp.,	Panther Valley W. Co. (Lehigh Coal & Navigation Co.)	22,000	20,000			1				
Hauto,	Carbon, Mauch Chunk Twp.,									—	
Lansford,	Carbon,						—				
Nesquehoning,	Carbon, Mauch Chunk Twp.,									—	
Coopersburg,	Lehigh,	Municipal,	770b					1			

Doylestown,	Bucks,	Municipal,	4,000	3,700				1		
East Mauch Chunk,	Carbon,	Mauch Chunk W. Co.,	4,000	4,000			1			
Emaus,	Lehigh,	Municipal,	4,100	3,075				1		
		Mountain W. Co.,		1,000			1			
Emerald,	Lehigh, Washington Twp.,	Washington W. S. Co.,	1,400	700					1	
Slatedale,	Lehigh, Washington Twp.,	(David Gring and others),							—	
Hazleton,†	Luzerne,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)	¶							
Hellertown,	Northampton,	Municipal,	1,150	1,150				1		
Lansdale,	Montgomery,	Lansdale W. Co.,	4,000	4,000			1			
Lehighton,	Carbon,	Lehighton W. S. Co.,	7,700	7,700			1			
Weissport,	Carbon,						—			
Suburbs of Lehighton,	Carbon,								—	
Macungie,	Lehigh,	Municipal,	800	700				1		
Mauch Chunk,	Carbon,	Upper Mauch Chunk W. Co.,	4,150	2,150			1			
		Mauch Chunk W. Co.,		2,000			1			
Morrisville,	Bucks,	Municipal,	2,300b	2,000				1		
Nazareth,	Northampton,	Blue Mountain Cons. W. Co.,	4,500	4,100			1			
Pen Argyl,	Northampton,		5,000	4,300			—			
Wind Gap,	Northampton,		1,200	1,000			—			
West Pen Argyl,	Northampton, Plainfield Twp.,		1,000b	1,000					—	
Palmerton,	Carbon,	Palmer W. Co.,	6,000	4,500			1			
Hazard,	Carbon, Lower Towamensing Twp.								—	
Pocono Lake Preserve,	Monroe, Tobyhanna Twp.,	Pocono Lake W. Co.,	*250	*250					1	
Pocono Pines,	Monroe, Tobyhanna Twp.,	Private (F. C. Miller),	20	*250						1
Newtown,	Bucks,	Newtown Artesian W. Co.,	1,750	1,700			1			
Quakertown,	Bucks,	The Quakertown W. Co.,	4,500	3,500			1			
Saylorsburg,	Monroe, Hamilton Twp.,	Hamilton W. Co.,	320b	300					1	
Sellersville,	Bucks,	Municipal,	2,000	1,850				1		
Slatington,	Lehigh,	Municipal,	4,860	5,000				1		
South Bethlehem,	Northampton,	Bethlehem City W. Co.,	23,000	29,575	1					
Northampton Hts.,	Northampton,		1,200				—			
Lower Saucon Twp. (part)	Northampton,		400						—	
Lehigh Coke Settlement,	Northampton, Lower Saucon Twp.		600						—	
Bethlehem (part),	Lehigh,		‖							
Fountain Hill,	Lehigh,		1,500				—			
Salisbury Twp. (part),	Lehigh,		700						—	
Rittersville,	Lehigh, Hanover Twp.,		800						—	
Homeopathic State Hospital	Lehigh, Hanover Twp.,		(1,100)	(1,100)						
Springtown,	Bucks, Springfield Twp.,	Springtown W. Co.,	250	190					1	
Stockton,	Luzerne, Hazle Twp.,	Wyoming Valley W. S. Co.,,	100	100					1	
Summit Hill,	Carbon,	Summit Hill W. Co.,	4,500	4,500			1			
Tobyhanna,	Monroe, Coolbaugh Twp.,	Private (N. S. Brittain),	800	260						1
Topton,	Berks,	Municipal,	1,100	1,100				1		
Walnutport,	Northampton,	Blue Ridge W. S. Co.,	1,100b	700			1			

OPERATING PUBLIC WATER SUPPLIES—Continued

Place	County	Ownership or control	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Weatherly,	Carbon,	Weatherly W. Co.,	2,480	2,100	------	------	1	------	------	------	------
White Haven,	Luzerne,	White Haven W. Co.,	1,500	1,200	------	------	1	------	------	------	------
White Haven Sanitorium,	Luzerne, Foster Twp.,	Private (State institution),	(250)	(250)	------	------	------	------	------	------	------
Yardley,	Bucks,	Yardley W. & Power Co.,	1,300	500	------	------	1	------	------	------	------

*Summer population
**Municipally supplied
†See Section No. 5, for 15% of total consumption
‡Listed under Hazleton, Section No. 5
§Listed under South Bethlehem, this Section
xU. S. census
¶Listed under Section No. 5
‖Listed under Bethlehem also
aEstimated by water companies
bEstimated by Water Supply Commission

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 2—*Continued*

Place	County	Ownership or control	Supply: Source: Surf.	Supply: Source: Ground	Supply: Source: Comb.	Supply: Method: Grav.	Supply: Method: Pumped	Supply: Method: Comb.	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Allentown,	Lehigh,	Municipal,	----	1	----	----	----	1	----	----	9,000,000	150t
Langhorne,	Bucks,	Langhorne Spring W. Co.,	----	1	----	----	----	1	67,000	----	67,000	19d
Langhorne Manor,	Bucks,											
South Langhorne,	Bucks,											
Bath,	Northampton,	Municipal,	----	----	1	1	----	----	----	----	40,000a	----
Bear Creek,	Luzerne, Bear Creek Twp.,	Private (A. Lewis),	----	----	1	----	----	1	5,000b	----	5,000b	----
		(Monroe & Lewis),	----	1	----	1	----	----	1,600b	----	1,600b	----
Beaver Meadow,	Carbon,	Beaver Meadow W. Co.,							‡			
		Citizens W. Co. of Beaver Meadow,	----	1	----	1	----	----	----	----	56,000b	----
Bethlehem,	Northampton,	Bethlehem W. Co.,							§			
		Municipal,	----	1	----	----	----	1	1,425,000	75,000	1,500,000	188t
Bowmanstown,	Carbon,	Private (Maurice Bowman),	----	----	1	1	----	----	----	----	12,000b	----
Bristol,	Bucks,	Municipal,	1	----	----	----	----	1	734,000	586,000	1,320,000	136t
Pine Grove,	Bucks,											
Catasauqua,	Lehigh,	Municipal (part),	----	1	----	----	----	1	500,000	----	500,000	83d
Cementon,	Lehigh, Whitehall Twp.,	Clear Springs W. Co.,	----	1	----	1	----	----	860,000	75,000	935,000	47t
Coplay,	Lehigh,											
East Catasauqua,	Lehigh, Hanover Twp.,											
Egypt,	Lehigh, Whitehall Twp.,											
Fullerton,	Lehigh, Whitehall Twp.,											
Hokendauqua,	Lehigh, Whitehall Twp.,											
Northampton,	Northampton,											
North Catasauqua,	Northampton,											
Siegfried,	Northampton, Allen Twp.,											
West Catasauqua,	Lehigh, Whitehall Twp.,											
West Coplay,	Lehigh, Whitehall Twp.,											

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 2—Continued

Place	County	Ownership or control	Supply: Source: Surf.	Supply: Source: Ground	Supply: Source: Comb.	Supply: Method: Grav.	Supply: Method: Pumped	Supply: Method: Comb.	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Coaldale,	Schuylkill, Rahn Twp.,	Panther Valley W. Co. (Lehigh Coal & Navigation Co.)	----	----	1	----	----	1	1,310,000	2,990,000	4,300,000	215t
Hauto,	Carbon, Mauch Chunk Twp.,											
Lansford,	Carbon,											
Nesquehoning,	Carbon, Mauch Chunk Twp.,											
Coopersburg,	Lehigh,	Municipal,	----	1	----	----	----	1	----	----	10,000b	----
Doylestown,	Bucks,	Municipal,	----	----	1	----	----	1	----	----	300,000	81t
East Mauch Chunk,	Carbon,	Mauch Chunk W. Co.,	1	----	----	1	----	----	270,000a	----	270,000a	----
Emaus,	Lehigh,	Municipal,	----	1	----	----	----	1	97,000a	3,000a	100,000a	----
		Mountain W. Co.,	----	1	----	1	----	----	7,300a	200a	7,500a	----
Emerald,	Lehigh, Washington Twp.,	Washington W. S. Co.,	1	----	----	1	----	----	21,000b	10,000b	31,000b	----
Slatedale,	Lehigh, Washington Twp.,	(David Gring and others),										
Hazleton,†	Luzerne,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)	----	----	----	----	----	----	2,080,000	900,000	†2,980,000	----
Hellertown,	Northampton,	Municipal,	----	1	----	1	----	----	----	----	58,000b	----
Lansdale,	Montgomery,	Lansdale W. Co.,	----	1	----	----	----	1	----	----	240,000b	----
Lehighton,	Carbon,	Lehighton W. S. Co.,	1	----	----	1	----	----	1,400,000	600,000	2,000,000	260t
Weissport,	Carbon,											
Suburbs of Lehighton,	Carbon,											
Macungie,	Lehigh,	Municipal,	----	1	----	1	----	----	40,000a	10,000a	50,000a	----
Mauch Chunk,	Carbon,	Upper Mauch Chunk W. Co.,	----	1	1	----	----	----	----	----	215,000b	----
		Mauch Chunk W. Co.,	----	1	----	1	----	----	240,000a	----	240,000a	----
Morrisville,	Bucks,	Municipal,	1	----	----	----	----	1	----	----	850,000a	----
Nazareth,	Northampton,	Blue Mountain Cons. W. Co.,	----	1	----	----	----	1	320,000	530,000	850,000	208t
Pen Argyl,	Northampton,		----	----	----	----	----	----	150,000	250,000	400,000	93t
Wind Gap,	Northampton,		----	----	----	----	----	----	60,000	40,000	100,000	100t
West Pen Argyl,	Northampton, Plainfield Twp.,		----	----	----	----	----	----	15,000	----	15,000	15d
Palmerton,	Carbon,	Palmer W. Co.,	----	1	----	----	----	1	350,000	1,000,000	1,350,000	78d
Hazard,	Carbon, Lower Towamensing Twp.											

Pocono Lake Preserve,	Monroe, Tobyhanna Twp.,	Pocono Lake W. Co.,		1				1			10,000b	
Pocono Pines,	Monroe, Tobyhanna Twp.,	Private (F. C. Miller),		1			1		15,000		15,000	60d
Newtown,	Bucks,	Newtown Artesian W. Co.,		1				1	150,000a	50,000a	200,000a	
Quakertown,	Bucks,	The Quakertown W. Co.,		1				1	215,000	60,000	275,000	79t
Saylorsburg,	Monroe, Hamilton Twp.,	Hamilton W. Co.,	1			1			6,000a	14,000a	20,000a	
Sellersville,	Bucks,	Municipal,			1			1	62,000a	63,000a	125,000a	
Slatington,	Lehigh,	Municipal,		1		1			540,000a	60,000a	600,000a	
South Bethlehem,	Northampton,											
Northampton Hts.,	Northampton,											
Lower Saucon Twp. (part)	Northampton,											
Lehigh Coke Settlement,	Northampton, Lower Saucon Twp.	Bethlehem City W. Co.,			1			1	‖		4,500,000a	
Bethlehem (part),	Lehigh,											
Fountain Hill,	Lehigh,											
Salisbury Twp. (part),	Lehigh,											
Rittersville,	Lehigh, Hanover Twp.,											
Homeopathic State Hospital	Lehigh, Hanover Twp.,											
Springtown,	Bucks, Springfield Twp.,	Springtown W. Co.,		1		1			5,700b		35,000a	
Stockton,	Luzerne, Hazle Twp.,	Wyoming Valley W. S. Co.,,		1		1			3,000b		5,700b	
Summit Hill,	Carbon,	Summit Hill W. Co.,			1	1			200,000		3,000b	
Tobyhanna,	Monroe, Coolbaugh Twp.,	Private (N. S. Brittain),		1				1	5,000a		200,000	44d
Topton,	Berks,	Municipal,		1				1			5,000a	
Walnutport,	Northampton,	Blue Ridge W. S. Co.,		1		1			22,000a	67,000a	50,400a	
Weatherly,	Carbon,	Weatherly W. Co.,	1			1			30,000a	30,000a	90,000a	
White Haven,	Luzerne,	White Haven W. Co.,			1			1			60,000a	
White Haven Sanitorium,	Luzerne, Foster Twp.,	Private (State institution),							40,000a		6 ,000b	
Yardley,	Bucks,	Yardley W. & Power Co.,			1			1	80,000a		40,000a	
											80,000a	

†See Section No. 5, for 15% of total consumption
‡Listed under Hazleton, Section No. 5
§Listed under South Bethlehem, this Section
¶Listed under Section No. 5
‖Listed under Bethlehem also
aEstimated by water companies
bEstimated by Water Supply Commission
dDomestic
tTotal

RAILROAD WATER SUPPLIES—SECTION NO. 2

LEHIGH VALLEY

Station	Source of Supply	Method of supply	Avg. daily consumption (gallons)	
			R. R.	Public
Easton,	Lehigh Canal,	Pump,	1,000,000	
Bear Creek Br.				
Bear Creek,	Sand Spring Run,	Gravity,	18,000	
Mahanoy & Hazleton Division				
Weatherly (engs.),	Small reservoir,	Gravity,	65,000	
Weatherly (shops),	Small reservoir,	Gravity,	3,000	
Ashmore,	Wyoming Valley W. S. Co.			88,300
Black Creek Jct.,	Small reservoir,	Gravity,	25,000	
Beaver Meadow,	Reservoir,	Gravity,	22,000	

WILKES-BARRE AND EASTERN

Clifton,	Lehigh River,	Pumped,	15,400	
Pocono Lake,	Small stream,	Gravity,	38,900	

DELAWARE, LACKAWANNA & WESTERN

Gouldsboro,	Pond,	Pumped,	150,000	
Lehigh,	Pond,	Gravity,	54,000	
Pocono Summit,	Pond,	Pumped,	158,000	
Tobyhanna,	Pond,	Pumped,	21,000	
Tobyhanna,	Deep well,		10	

CENTRAL OF NEW JERSEY

Bethlehem,	Canal,	Pumped,	100,000	
East Allentown,	Canal,	Pumped,	125,000	
West Allentown,	Canal,	Pumped,	80,000	
Catasauqua,	Canal,	Pumped,	50,000	
Treichler,	Creek,	Gravity,	75,000	
Walnutport,	Blue Ridge W. S. Co.,			70,000
Mauch Chunk,	Creek,	Gravity,	500,000	
Nesquehoning Jct.,	Creek,	Gravity,	275,000	
Coalport,	Creek,	Gravity,	75,000	
Rockport,	Hunter Run,	Gravity,	65,000	
Mile Post 137,	Hunter Run,	Gravity,	40,000	
Upper Lehigh Jct.,	Hunter Run,	Gravity,	30,000	
White Haven,	Canal,	Pumped,	200,000	
Hauto,	Creek,	Gravity,	100,000	
Haucks,	Artesian well,	Pumped,	50,000	
Tamanend,	Creek,	Gravity,	10,000	
Silver Brook,	Creek,	Gravity,	25,000	
Audenreid,	Honey Brook W. Co.,			20,000
Northampton,	Atlas Cement Co.,		15,000	

CHESTNUT RIDGE

Aquashicola,	Palmer Water Co.,			3,000
Kunkletown,	Spring,		1,500	

NORTHAMPTON AND BATH

Northampton,	Atlas Portland Cement Co.,		41,000	
Navarro,	Atlas Portland Cement Co.,		30,000	

RAILROAD WATER SUPPLIES—Continued

PHILADELPHIA & READING

Station	Source of Supply	Method of supply	Avg. daily consumption (gallons) R. R.	Avg. daily consumption (gallons) Public
New York Div'n				
Bingen,	Stream,	Pumped,	20,500	
Coopersburg,	Spring,	Gravity,	4,000	
Doylestown,	Municipal,			37,000
New Hope,	Canal,	Pumped,	22,000	
New Hope,	Artesian well,	Pumped,	26,000	
South Bethlehem,	Municipal,			185,000
Jonney,	Stream,	Gravity,	113,000	
Yardley,	Delaware River,	Pumped,	500,000	
Rockhill,	Stream,	Pumped,	40,000	
	Artesian well,	Pumped,	30,000	
Reading Div'n				
Catasauqua,	Lehigh River,	Pumped,	50,000	
Dillinger,	Spring,	Gravity,	34,000	
East Penn Jct.,	Little Lehigh River,	Pumped,	250,000	
Trexlertown,	Creek,	Pumped,	10,000	
Wilmington & Columbia Div'n				
Little Run Jct.,	Municipal,			5,000

PENNSYLVANIA

New York Div'n				
Bristol (4 track pans),	Municipal works, Otter Creek.	Pumped,		700,000
West Morrisville,	Municipal works,			370,000
	Canal,	Pumped,	1,000,000	

LEHIGH & NEW ENGLAND

Bath,	Monocacy Creek,	Pump,	54,000	
Berlinsville,	Run,	Pump,	6,000	
Bull Run Jct.,	Panther Valley W. Co.,			20,000
Lansford,	Panther Valley W. Co.,			100,000
Millers,	Spring,	Gravity,	14,000	
Semmel,	Spring,	Gravity,	8,600	

IRONTON

Hokendauqua,	Lehigh River,	Pumped,	20,000	
Egypt,	Clear Spring W. Co.,			15,000
Ormrod,	Coplay Creek,	Gravity,	15,000	
Totals,			5,668,910	1,613,300

INDUSTRIAL WATER SUPPLIES, SECTION NO. 2—(MISCELLANEOUS COMPANIES)

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product	Ret'd to stream (%)	Increase in temp. °F
				Domestic	Industrial			
Allentown, Lehigh County,	American Steel & Wire Co.,	Little Lehigh River,	Pumped,		11,000,000	500 tons	82	40
	Arbogast & Bastian Co.,	Drilled well,	Pumped,		230,000			
	Lehigh Valley Transit Co.,	Lehigh River,	Pumped,		400,000		95	10
	National Silk Dyeing Co.,	Lehigh Canal,	Pumped,		3,600,000		100	
	National Silk Dyeing Co.,	Artesian wells,	Pumped,		40,000			
Bath, Northampton County	Bath Portland Cement Co.,	Two springs,	Gravity,		400,000	2,270 bbls.	None	
		Two wells,	Pumped,					
Bethlehem, Northampton County.	Sauquoit Silk Mfg. Co.,	Lehigh Canal,	Pumped,		475,000		90	44
		Well,	Pumped,		15,000			
	J. Widman & Co. Brewery,	Artesian well,	Pumped,		19,000			
	Bethlehem Lime & Stone Co.,	Well,			1,000			
Bristol, Bucks County,	Bristol Patent Leather Co.,	Lehigh Canal,	Pumped,		40,000	50,000 sq. ft.	50	
	Warner J. Steel,	Lehigh Canal,	Pumped,		47,000			
	W. H. Grundy & Co.,	Lehigh Canal,	Pumped,		45,000			
	Corona Kid Co.,	Lehigh Canal,	Pumped,		40,000			
	Bristol Improvement Co.,	Lehigh Canal,	Pumped,		50,000			
Catasauqua, Lehigh County	David & Thomas (Mach. Shop),	Creek & well,	Pumped,					
		Well,	Pumped,					
	Wahneta Silk Co.,	Lehigh Canal,	Pumped,		120,000			
Chapman, Northampton County.	Keystone Slate Co.,	Monocacy Creek,	Pumped,		4,000	32 squares		
Danielsville, Nortampton County.	Lobb, Parry & Co. Slate,	Stream,	Pumped,		3,400		33	No
Emaus, Lehigh County,	Keystone Silk Co.,	Drilled well,	Pumped,					
		Five springs,	50,000 gal. res.,					
			Gravity,					
	Reading Iron Co.,	Stream,	Gravity,		c 2,160,000	200 tons	50	20
		Drilled well,	Pumped,		s			
	Donaldson Iron Co.,	Two drilled wells,	Pumped,					
Egypt, Lehigh County,	Giant Portland Cement Co.,	Coplay Creek,	Pumped,		250,000	5,000 bbls.	60	50
	Whitehall Cement Mfg. Co.,	Lehigh River,	Pumped,		s 7,000,000	4,440 bbls.	95	40
Lansdale, Montgomery County.	Central Radiator Co.,	Drilled well,	Pumped,		8,000			
Northampton, Northampton County.	Atlas Portland Cement Co.,	Hokendauqua Creek,	Gravity Stor. res.,		49,650,000			
	John H. Meyer Dyeing Co. Plant,	Lehigh Canal,	Pumped,		150,000			

Palmerton, Carbon County	New Jersey Zinc Co.,	Lehigh River,	Pumped,		4,900,000			
		Artesian wells,	Pumped,		70,000			
		Palmer W. Co.,		(30,000)	(11,000,000)			
Parryville, Carbon County,	Carbon Iron & Steel Co.,	Pohopoco Creek,	Pumped & Gravity,		s 3,000 000 c 3,000,000	125 tons		
Quakertown, Bucks County	J. S. Harley Harness Works,	Artesian well,	Pumped,					
		Quakertown W. Co.,						
Siegfried, Northampton County.	Lawrence Portland Cement Co.,	Quarries,	Pumped,		3,988,000	4,470 bbls.		60
		Artesian well,	Pumped,					
		Lehigh Canal,	Pumped,					
		Clear Springs W. Co.			(12,000)			
Slatedale, Lehigh County,	Royal Blue Slate Co.,	Washington W. S. Co.	Pumped,		(4,000)			
	Highland Slate Co.,	Trout Creek,						
Slatington, Lehigh County,	Hazel Dell Slate Co.,	Washington W. S. Co.	Gravity,					
		Abandoned quarry,						
	Washington Slate Co.,	Abandoned quarry,	Gravity,					
	American Slate Works,	Spring,	Gravity,		4,000			
	E. D. Peters & Son. Slate,	Washington W. S. Co.				20 squares		
	Woodley Slate Co.,	Stream,	Pumped,		20,000		25	No
	Blue Valley Slate Mfg. Co.,	Quarry,	Pumped,		10,000			
South Bethlehem, Lehigh County.	Bethlehem Steel Co.,	Lehigh River,	Pumped,		76,250,000		95	12
	Lehigh Valley Silk Mills,	Springs, Lloyd Mill,	Gravity,		25,000			
		Artesian wells, Warren Mill.	Pumped,		25,000			
	Gallia Silk Mills,	Artesian well,	Pumped,		12,000			
	S. Bethlehem Brewing Co.,	Well,	Pumped,		70,000			
	Lehigh Coke Co.,	Lehigh River,	Pumped,		3,250,000	1,700 tons	85	25
White Haven, Luzerne County.	The General Crushed Stone Co.,	Wrights Creek,	Pumped,		14,500	400 tons	16	
Yardley, Bucks County,	Cold Spring Bleachery,							
	New Jersey and Pennsylvania Traction Co.	Lehigh Canal,	Pumped,		s 150,000			
Total from private systems,					169,935,900			

s = Water for steam purposes
c = Water for cooling or condensing purposes

INDUSTRIAL WATER SUPPLIES, SECTION NO. 2—(COAL MINING COMPANIES)

Place	Company	Source	Method	Consumption (gallons per day)		Daily Amount of Product short tons	Number of Collieries supplied
				Domestic	Industrial		
Carbon County:							
Beaver Meadow,	Evans Colliery Co.,	*Wyoming Valley W. S. Co.			s(2,100)	107	1
Leviston,	Coleraine Colliery,	One spring,	1,125,000 gal. res.,	25,000 (500 pop.)			
	Est. of A. S. VanWickle,	One artesian well,	Gravity,				
Carbon and Schuylkill Counties:		One artesian well,	Pumped,		s175,000	933	1
Panther and Nesquehoning Valley,	Lehigh Coal & Navigation Co.,	Swamp and mine,	Pumped,		w8,000,000		
Luzerne County:		†Panther Valley W. Co.			s(3,000,000)	16,487	9
Foster Township,	M. S. Kemmerer & Co.,	Spring, Well,	Gravity, Pumped, 2 reservoirs,	5,500	s30,000	417	1
Hazle Brook,	J. S. Wentz & Co. (Midvalley Coal Co.)	2 artesian wells,	Pumped to reservoir and tanks	5,700	s478,000	630	1
Upper Lehigh,	Upper Lehigh Coal Co.,	3 drilled wells,	Pumped to reservoir,	10,000 (750 pop.)	s860,000	635	1
Total from private systems,				46,200	9,543,000		

sWater for steam purposes
wWater for washing coal
*System described under Hazleton, Section No. 5.
†System described under Lansford, Section No. 2.

ALLENTOWN CITY, LEHIGH COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 51,913; increase since 1900, 16,497. Estimated 1915, 65,000a

LOCATION

Western Lehigh County, at confluence of Little Lehigh and Jordan creeks with Lehigh River; on Lehigh Valley R. R., Central R. R. of New Jersey, Philadelphia & Reading Ry., Perkiomen R. R. and Lehigh Canal. Center of three electric railway systems. Built-up portion sloping towards river and creeks.

INDUSTRIES

In vicinity are 34 cement mills of Lehigh district, employing about 12,000 men and having output of about one-third of total for United States. Other industries are iron works, silk mills, furniture factories, shoe factories, cigar factories, hosiery and dyeing works, automobile manufacturing, wire factory, cement block and brick works, clothing factory and auto fire engine manufacturing.

WATER SUPPLY

Works built in 1827 by Northampton Water Co., incorporated 1816; reorganized as Allentown Water Co. 1850 and sold to borough in 1886 for $140,000.00. A large number of private industrial water supplies.

SOURCE AND COLLECTION

(1) Schantz's spring, 5 miles southwest of city, at headwaters of Cedar Creek, tributary of Little Lehigh Creek; water collected in 2,700,000 gallon basin and delivered through 30-inch main 5 miles to pumping station in city at foot of Fourteenth Street near Little Lehigh Creek. The 30-inch line ends in standpipe 10 feet diameter and 100 feet high, elevation of base 26 feet above city datum (elevation 230.66 above mean sea level). Reported average daily flow 8,000,000 gallons.

(2) Crystal Spring, near pumping station in city; water collected in 1,200,000 gallon basin and delivered to pump suctions by intake

channel 8 feet wide and 62 feet long. Reported average daily flow 4,000,000 gallons. Water treated with hypochlorite.

DISTRIBUTION

Two pumping stations, one containing two 3,000,000 gallon Knowles pumps, pumping normally from Crystal Spring, against a head of 255 feet, to standpipe 15 feet diameter and 150 feet high on hill above pumping station, elevation of base 113.4; other pumping station contains one 8,000,000 gallon Holly pump and one 10,000,000 gallon D'Auria, pumping water from Schantz's spring line against a net head of 162 feet to standpipe. Pressures 51 to 80 pounds. A 12-inch line extends across Lehigh River bridge to East Allentown, which was supplied by Bethlehem City Water Co. until 1914. Distributing mains as follows:

Size (inches),	3	4	6	8	10	12	20	24	30	36	Total
Length (miles),	2.53	7.86	27.58	18.03	0.61	15.93	0.47	0.06	0.88	0.03	73.98
Per cent.,	3.4	10.6	37.2	24.4	0.9	21.5	0.6	0.1	1.2	0.1	100.0

Six hundred and eleven fire hydrants.

CONSUMPTION

Supply to about 60,000 people; about 14,000 taps, small number metered. Average daily consumption about 9,000,000 gallons, measured by pump displacement.

COST AND REVENUE

Total cost of works, about $1,300,000; annual operating expenses, $45,000 (approximate); gross revenue, $115,000 (approximate).

BATH BOROUGH, NORTHAMPTON COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,057; increase since 1900, 326.
Estimated 1915 1,500

LOCATION

Central Northampton County, 5 miles west of Nazareth, on east branch of Monocacy Creek; includes 123 acres, divided by creek into east and west parts; along Central R. R. of New Jersey, Lackawanna

& Western, Northampton and Bath railroads and Blue Ridge Traction Co. Range in elevation about 65 feet.

INDUSTRIES

Extensive cement works in vicinity. Silk mills, stocking factory, grist mill, and distillery. Residences of many employees of Bath, Pennsylvania and Pen Allen Cement Works, 2 miles distant.

WATER SUPPLY

Municipal plant built 1903. Few private supplies from cisterns, springs and dug and driven wells.

SOURCE AND COLLECTION

Intake dam on Hatchgravel Creek, 2.5 miles northeast of borough, drainage area 1.6 square miles; 4-inch main 2,000 feet long leads from intake to 60,000 gallon storage reservoir. No flow from springs during droughts. Near spring is 6-inch well, 235 feet deep in shale and slate; 6-inch pipe 400 feet to spring catch basin.

A hypochlorite treating plant on reservoir embankment feeds to raw water at inlet end.

DISTRIBUTION

A 6-inch gravity delivery main, 2 miles long, from reservoir to borough, and 1.8 miles of 6-inch and 4-inch distributing mains, principally 4-inch. Pressure about 80 pounds; 23 fire hydrants, 6-inch.

CONSUMPTION

About 1,000 persons supplied; 204 taps, none metered. Reported average daily consumption 40,000 gallons; no means of measuring.

COST AND REVENUE

Total cost of work, $23,000; gross revenue, $2,050.

BEAR CREEK (BEAR CREEK TWP.), LUZERNE COUNTY

PRIVATE SUPPLIES

Estimated 1915 population, 175a.

LOCATION

Central eastern Luzerne County, 8 miles southeast of Wilkes-Barre, on Bear Creek, tributary of Lehigh River; along Bear Creek Branch Lehigh Valley R. R.

INDUSTRIES

Lighting plant and ice plant.

WATER SUPPLY

Private plants of (1) Albert Lewis, who has an ice dam on Bear Creek; (2) Monroe & Lewis.

(1) SUPPLY OF ALBERT LEWIS

SOURCE AND COLLECTION

Water from springs 0.25 mile east of village collected into three small concrete reservoirs: lowest one, at elevation 250 feet above town, capacity of 3,200 gallons, serves as distributing reservoir. Auxiliary supply by pumping directly into mains from Bear Creek with 4-hp. Worthington steam pump. Water soft.

DISTRIBUTION

By gravity through 3-inch mains. No fire hydrants.

CONSUMPTION

Supply to 125 persons; 30 taps. No means of measuring consumption; assuming 40 gallons per capita, would be 5,000 gallons daily, all domestic. Engines of Lehigh Valley R. R. also supplied.

(2) MONROE & LEWIS SUPPLY

SOURCE AND COLLECTION

Water from springs collected into small concrete reservoir 15 feet square about 200 feet above town.

DISTRIBUTION

By gravity through 1.5 miles 2½-inch and 1½-inch mains.

CONSUMPTION

About 40 persons supplied; six taps. No means of measuring consumption; assuming 40 gallons per capita, would be 1,600 gallons daily.

BEAVER MEADOW BOROUGH, CARBON COUNTY

THE CITIZENS WATER COMPANY OF BEAVER MEADOW, PA.
WYOMING VALLEY WATER SUPPLY COMPANY
(Lehigh Valley Coal Company)

Population 1910 census, 1,530; increase since 1900, 152. Estimated 1915, 1,530a.

LOCATION

Western Carbon County, on Beaver Creek; along Lehigh Valley R. R. Lowest point of borough at elevation 1,540.

INDUSTRIES

Residents mostly employees of Lehigh Valley Coal Co.

WATER SUPPLY

Citizens Water Co. of Beaver Meadow, Pa., incorporated 1905 for Banks Township.

Wyoming Valley Water Supply Co., Hazleton Department, subsidiary of Lehigh Valley Coal Co. Supplies 250 people, having leased Beaver Meadow Water Co., incorporated 1893 for Banks Township. (See Hazleton, Section No. 5.)

THE CITIZENS WATER COMPANY OF BEAVER MEADOW, PA

SOURCE AND COLLECTION

Water from springs collected into reservoir near borough at elevation 1,700. During 1908 drought all water purchased from Hazleton Water Co. Water soft.

DISTRIBUTION

By gravity through about 1 mile of mains; 5 fire hydrants.

CONSUMPTION

About 1,400 persons supplied; 200 taps. Consumption not known; assuming 40 gallons per capita, it would amount to 56,000 gallons daily.

BETHLEHEM BOROUGH, NORTHAMPTON AND LEHIGH COUNTIES

MUNICIPAL WATER WORKS

BETHLEHEM CITY WATER COMPANY
(M. P. Quinn and others)

Population 1910 census, 12,837; increase since 1900, 2079.
Estimated 1915, 14,500a.

LOCATION

Southern Northampton County and southeastern Lehigh County, on north bank of Lehigh River, divided by Monocacy Creek into Bethlehem proper and that part of the borough which was formerly West Bethlehem Borough, in Lehigh County. Greater portion of borough is on rolling plateau rising gradually from north bank of Lehigh River and east and west banks of Monocacy Creek. Range of elevation, in district supplied, about 135 feet. On Central R. R. of New Jersey, Philadelphia & Reading Ry., Lehigh & New England R. R., Lehigh Valley Transit Co. (electric) and Lehigh Coal & Navigation Co.'s Canal.

INDUSTRIES

Residential community; silk mill, two breweries; large number of manufacturing plants across river in South Bethlehem.

WATER SUPPLY

(1) Municipal plant, next to oldest in State, first installed in 1762 and works changed at different times, the last one in 1912, being a change of source from the old spring to artesian wells.

(2) Bethlehem City Water Co., incorporated 1914 for Salisbury Township, Lehigh County, supplies West Bethlehem district. Incorporated as Bethlehem Water Co. and name changed as above.

MUNICIPAL WORKS

SOURCE AND COLLECTION

Two artesian wells, called Ulick Mills wells, 1 mile from center of borough, along banks of Monocacy Creek. Wells 8-inch diameter and 650 and 750 feet deep in limestone.

A 12-inch well near others now being drilled; is down 600 feet and giving considerable water. Water pumped to two standpipes in borough limits, capacities 735,000 and 1,400,000 gallons. Treated with hypochlorite at pumping station when necessary. Pumping station installation 1,500,000 gallon DeLaval centrifugal pump; 2,000,000 gallon DeLaval centrifugal pump, operated by Westinghouse motor; 2,000,000 gallon Deane steam pump held in reserve; operated by 50-hp. boiler, two air compressors.

Supply mains as follows:

Size (inches),	20	12	Total
Length (miles),	0.5	1.5	2.0

Water medium hard.

DISTRIBUTION

By gravity from standpipes. Distributing mains as follows:

Size (inches),	8	6	4	Total
Length (miles),	2.0	18.0	4.0	24.0
Per cent.,	8	75	17	100.0

Pressures 20 to 80 pounds; 85 fire hydrants, 4-inch.

CONSUMPTION

About 8,000 persons supplied; 2,200 taps. Stated average daily consumption, determined by pump displacement, 1,500,000 gallons with maximum of 1,800,000 gallons, 5% industrial. No meters.

COST AND REVENUE

Total cost of works, $175,000.00; annual operating expenses, $18,000.00; gross revenue, $30,000.00.

HISTORICAL

The Bethlehem water works, the second oldest in the State, were begun in 1754 by Hans Christopher Christiansen, and placed in operation in 1762. The water was pumped against a head of 70 feet and later increased to 112 feet, from a large spring issuing from magnesium limestone, to a wooden standpipe on the site of present Moravian church. The pumping plant consisted of three single acting iron force pumps 4-inch diameter and 18-inch stroke, worked by a triple crank and geared to shaft of an undershot waterwheel 18-inch diameter, working under head of 2 feet. The rising mains were of gum wood and the distributing pipes of yellow pine. Water was distributed from standpipe to tanks built in vicinity of principal dwellings.

The gum wood mains were superseded by lead pipes in 1786, and the pine mains were renewed in 1769. The pine pipes were gradually abandoned until in 1796 all pipes were of lead.

The original standpipe was removed to make way for the Moravian church, and a second standpipe of sandstone was built on Market Street near Cedar; a 36,000 gallon reservoir in reserve built near standpipe was put in service 1817.

Iron pipes replacing lead ones were introduced in 1813; packed with leather at connections and tightened with screws at flanged ends.

In 1832 the triple pumps were supplanted by a double acting pump 5-inch diameter and 3-foot stroke, constructed by Rush & Muhlenberg, of Philadelphia.

A reservoir built that year on Broad Street on more elevated ground took the place of the water tower.

The Bethlehem Water Co. was incorporated in 1845, taking over the works and continued distributing the water until 1872 when plant and charter rights were sold to the borough.

The Broad Street reservoir became useless in 1871, and a standpipe located on North Street near High Street at an elevation of 149 feet above the pumping station took its place.

Steam power, instead of water, to operate pumps was first used in 1868. In 1874 the works were enlarged by adding a second steam pump, daily capacity of 500,000 gallons; wooden conduit from spring to suction well was replaced by 18-inch iron pipe.

The borough's growth brought consumption to such a point that it practically equaled the flow of the spring. This, together with the fact that practically all cesspools drained into limestone caverns from which the spring was fed, led to determination to secure a new source of supply.

BETHLEHEM CITY WATER COMPANY

Collecting and distributing works described under South Bethlehem. Supplies about 4,500 person in West Bethlehem, consumption being included in figures given under South Bethlehem.

BOWMANSTOWN BOROUGH, CARBON COUNTY

PRIVATE SUPPLY

Estimated population, 900a.

LOCATION

Southern Carbon County, on Lehigh River, along Central R. R. of New Jersey.

INDUSTRIES

Principally mining and manufacturing of paint; silk mill.

WATER SUPPLY

Private system owned and operated by Maurice Bowman.

SOURCE AND COLLECTION

Spring rising in tunnel of worked out paint mine about 50 feet above lowest portion of town. Higher portions of town not supplied. Water medium hard.

DISTRIBUTION

By gravity through about 0.8 mile of iron and wooden pipes, as follows:

Size (inches),	6	4	3	1¼	Total
Length (miles),	0.2	0.2	0.3	0.1	0.8

Pressure about 15 pounds; no fire hydrants.

CONSUMPTION

About 300 persons supplied; 50 taps. No means of measuring consumption; assuming 40 gallons per capita, would be 12,000 gallons per day.

BRISTOL BOROUGH AND PINE GROVE (BRISTOL TWP.), BUCKS COUNTY

MUNICIPAL WATER WORKS

	Population 1910 census	Increase since 1900	Estimated 1915	Supplied
Bristol,	9,256	2,152	10,000a	9,700a
Pine Grove,	------	------	200a	100a

LOCATION

Southern Bucks County, on west bank of Delaware River; along New York Division of Pennsylvania R. R. Range in elevation 20 feet.

INDUSTRIES

Carpet and worsted manufacturing, rolling mills and cast iron pipe manufacturing.

WATER SUPPLY

Municipal water works built in 1874 by Bristol Water Co. and purchased by borough in 1912.

SOURCE AND COLLECTION

Twenty-four inch intake pipe in Delaware River, connected to low and high service pumps at pumping station on west bank of river, near corner of Walnut and Radcliffe streets. Pumping station contains two boilers of 80 and 150 hp., two Worthington duplex pumps of 1,666,000 and 2,000,000 gallons capacity, one Worthington air pump and two Lawrence 8-inch centrifugal pumps of capacity of 2,000,000 gallons each. High service pumps can deliver directly into distributing mains if necessary.

FILTERS

Raw water treated in 24-inch intake with sulphate of alumina. Water pumped to two sedimentation tanks, capacity 124,000 gallons; flows by gravity through 2,000,000 gallon mechanical gravity filter, four units, to 64,000 gallons clearwater basin; treated with hypochlorite, and pumped to two standpipes of 32,000 and 150,000 gallons capacity, latter elevated on 150-foot trestle.

DISTRIBUTION

By gravity. Distribution mains as follows:

Size (inches),	16	12	10	8	6	4	smaller	than 4	Total
Length (miles),	0.1	0.2	0.3	1.3	5.8	2.4		0.1	10.2
Per cent.,	(	6	)	13	57	(	24	)	100

Pressures 60 to 76 pounds; 78 fire hydrants, 4-inch.

CONSUMPTION

About 9,800 persons supplied; 1400 taps, one is metered. Average daily consumption as measured by pump displacement 1,320,000 gallons, of which 586,000 gallons is industrial, entirely metered.

COST AND REVENUE

Total cost of works, $133,000; annual operating expenses, $18,400; gross revenue, $26,800.

CATASAUQUA, COPLAY, NORTHAMPTON, NORTH CATASAUQUA BOROUGHS AND NEIGHBORING VILLAGES, LEHIGH AND NORTHAMPTON COUNTIES

CLEAR SPRINGS WATER COMPANY
CATASAUQUA MUNICIPAL WATER WORKS

Places	Population 1910 census	Increase since 1900	Estimated 1915 for district	Supplied in district
NORTHAMPTON COUNTY				
Northampton borough,	8,729	inc. 1902		
N. Catasauqua borough,	2,030	inc. 1907		
Allen Township:				
Siegfried village,	822*			
LEHIGH COUNTY				
Catasauqua borough,	5,250	1,287		
Coplay borough,	2,670	1,089		
Hanover township,				
E. Catasauqua village,				
Whitehall Township:				
Cementon village,				
Egypt village,				
Fullerton village,				
Hokendauqua village,				
W. Catasauqua village,				
West Coplay,				
			29,000	26,000

*Only the village and boroughs enumerated and not the township are included in these estimates

LOCATION

Territory on both sides of Lehigh River from Allentown 6 miles north, including two boroughs and seven villages in Lehigh County and two boroughs and one village in Northampton County; total population about 29,000.

INDUSTRIES

Cement works, iron works and silk mills.

WATER SUPPLY

(1) From Clear Springs Water Co., a merger, incorporated 1902, for Lehigh and Northampton counties.

(2) Part of Catasauqua supplied by municipal works.

Clear Springs Water Co. is a merger of seven companies as follows:

Name	Inc.	Incorporated for
Clear Springs Water Co.,	1899	Lehigh and Northampton counties
Coplay Water Co.,	1901	Coplay borough, Lehigh county
Crane Water Co.,	1898	Catasauqua borough, Lehigh county
Hanover Crane Water Co.,	1901	Hanover township, Lehigh county
Whitehall Crane Water Co.,	1901	Whitehall township, Lehigh county
Allen Crane Water Co.,	1901	Allen township, Northampton county
Alliance Water Co.,	1901	Alliance borough, Northampton county

(1) CLEAR SPRINGS WATER COMPANY

SOURCE AND COLLECTION

System of supply is complex, being derived from a number of different sources and distributed over extensive territory divided by river. Sources as follows:

(1) Main supply from Spring Mill Creek, tributary of Lehigh River, supplemented by pumping from Lehigh River; 100,000 gallon reservoir near mouth of creek, about 1 mile north of Cementon, at elevation 325 feet above sea level; watershed area 2.88 square miles. Water delivered by gravity from reservoir or pumped from river by 2,000,000 gallon centrifugal pump to a twin 167,000 gallon sedimentation basin, between reservoir and river, thence by gravity through 2,000,000 gallon mechanical filter plant of four units into 60,000 gallon clear water basin; pumped through 4,000 feet of 10-inch main to 3,000,000 gallon reservoir on hill northwest of Cementon, known as Lincoln Heights. By regulating valve, water can be taken entirely from river or entirely from creek as desired. Total supply from this source approximately

1,200,000 gallons per day, creek water being used greater portion of time. Pumping installation 2,000,000 gallon centrifugal pump, 1,000,000 gallon Jeansville duplex pump and one 125 hp. boiler.

(2) At Catasauqua is pumping station No. 2, drawing partly from Lehigh Canal and partly from artesian well about 250 feet deep and about 100 feet distant from canal. Water raised by airlift from well into a small pump well at station, and from canal by 10-inch intake pipe in headrace of Crane Iron Works; forced through 12-inch main into equalizing standpipe near pumping station and into distributing system, excess backing up into 500,000 gallon standpipe in extreme northern part of borough. Standpipe still in use though pumping station No. 2 has been out of service since September, 1910.

Pumping installation consists of one 1,000,000 gallon Worthington duplex pump; one 2,000,000 gallon centrifugal pump; one P. H. & F. M. Root Co.'s blower pump; one 125 hp. boiler.

(3) Part of Cementon supplied from Leisenring Spring in village, a separate supply not physically connected to rest of system. All water soft.

DISTRIBUTION

By gravity from distributing reservoir at Cementon to Cementon, Egypt, Coplay, West Coplay, East Catasauqua, West Catasauqua, Hokendauqua, Fullerton, Catasauqua, North Catasauqua, Northampton and Siegfried; pressure 80 to 130 pounds. Distributing mains as follows:

Size (inches),	16	14	12	10	8	6	4	2 & 3	Total
Length (miles),	0.3	0.3	3.7	4.7	3.0	22.4	8.7	0.2	43.3
Per cent.,	(	10	)	11	17	25	(	20	) 100

One hundred and ninety-five fire hydrants, 6-inch.

CONSUMPTION

About 20,000 persons supplied; 2,271 taps. Stated average daily consumption, measured by pump displacement, 935,000 gallons, with maximum 1,181,000 gallons; 92% domestic and 8% industrial; 150 taps metered, 25% industrial. Metered consumption 69,000 gallons daily industrial and 39,000 gallons domestic.

(2) MUNICIPAL SYSTEM

SOURCE AND COLLECTION

Two driven wells 170 feet apart in northeastern corner of borough about 200 feet west of, and 25 feet higher than, Catasauqua Creek at this point. Wells 8-inch and 10-inch diameter and 220 and 240 feet in depth, cased to rock. Minimum flow stated to be 500 gallons

per minute. Water raised by air-lift to 366,000 gallon receiving basin and pumped through 2,000 feet of 16-inch and 14-inch mains to 106,000 gallon standpipe on hill outside northern borough line in borough of North Catasauqua. Pumping equipment, two 1,000,000 gallon Worthington pumps; two 125 hp. boilers; two air compressors; one vacuum pump for low pressure.

DISTRIBUTION

By gravity from standpipe through 12-inch mains. Originally pumped direct to distributing system, excess backing up into standpipe; these connections can be used in emergency. Distributing mains as follows:

Size (inches,	12	10	8	6	4	Total
Length (miles),	0.4	0.2	1.3	3.5	1.8	7.2

Pressure 44 to 80 pounds; 69 fire hydrants, 6-inch and 4-inch.

CONSUMPTION

About 6,000 persons supplied; 800 taps. Stated average daily consumption, measured by pump displacement, 500,000 gallons; maximum 800,000 gallons; all domestic; 83 gallons per capita. Only 3 taps metered.

COST AND REVENUE

Total cost of works, $95,000; annual operating expenses (1913), $9,000; gross revenue (1913), $9,200.

COOPERSBURGH BOROUGH, LEHIGH COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 683, decrease since 1900, 187. Estimated 1915, 770b.

LOCATION

Southeastern Lehigh County, near headwaters of Saucon Creek, on border line between Lehigh and Bucks counties; 7 miles south of Bethlehem; on Bethlehem Branch Philadelphia & Reading Ry., and Lehigh Valley Traction line.

INDUSTRIES

Hosiery mill, cigar factory and three smaller factories.

WATER SUPPLY

Municipal works built in 1902 and enlarged in 1911.

SOURCE AND COLLECTION

(1) Two springs in Bucks County, 2 miles east of borough, collected into 300,000 gallon storage reservoir nearby.

(2) An 8-inch drilled well 300 feet deep in borough near Philadelphia & Reading station, 1,100 feet from Saucon Creek and 40 feet higher; average daily yield stated to be 144,000 gallons. Water pumped directly into 8-inch main by 110,000 gallon pump. All water medium hard.

DISTRIBUTION

Through 8-inch gravity main from (1) and 8-inch force main from (2). Distributing mains as follows:

Size (inches),	8	6	4	Total
Length (miles),	2.0	0.5	1.0	3.5

Pressures 50 to 85 pounds. Reservoir at springs used for storage and emergencies.

DOYLESTOWN BOROUGH, BUCKS COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 3,304; increase since 1900, 2,701. Estimated 1915, 4,000a.

LOCATION

Central Bucks County near Neshaminy Creek; on Bethlehem Branch of Philadelphia & Reading Ry. and Philadelphia & Eastern Electric Ry.

INDUSTRIES

Silk mill.

WATER SUPPLY

Municipal plant.

SOURCE AND COLLECTION

From springs, three drilled wells about 0.5 mile northeast of center of borough and small stream; flow of springs 200,000 gallons, and of wells 100,000 gallons, daily. Water from springs flows into small collecting reservoir and is pumped against a head of 164 feet to 225,000 gallon standpipe about 0.25 mile northwest of pumping station. Water lifted from wells to collecting reservoir by compressed air. Emergency storage reservoir at pumping station collects flow of small stream used only in case of fire. Pumping installation one 1,000,000 gallon Holly pump, one 500,000 gallon Worthington pump, one 70 hp. and two 100 hp. boilers. Water soft.

DISTRIBUTION

By gravity through 8.7 miles of mains as follows:

Size (inches),	8	6	4	3 & smaller	Total
Length (miles),	0.3	2.6	5.4	0.4	8.7

Pressures 25 to 60 pounds; 85 fire hydrants, 21 with 4-inch and 64 with 2½-inch barrels.

CONSUMPTION

About 3,700 persons supplied; 650 taps. Stated consumption 300,000 gallons daily, measured by pump displacement. No meters.

COST AND REVENUE

Total cost of works, $80,000; gross revenue, $12,620; operating expenses, $6,430.

EAST MAUCH CHUNK BOROUGH, CARBON COUNTY

MAUCH CHUNK WATER COMPANY

Population 1910 census, 3,546; increase since 1900, 90. Estimated 1915, 4,000a.

LOCATION

Central Carbon County, on east side Lehigh River, directly across from Mauch Chunk; along Lehigh Valley R. R.

INDUSTRIES

Residential district; silk mill.

WATER SUPPLY

Mauch Chunk Water Co., incorporated 1849, also supplying Mauch Chunk Borough. The East Mauch Chunk Water Co. received a charter in 1860 for East Mauch Chunk Borough but never started operations. In 1861 Mauch Chunk Water Co. secured supplementary charter for East Mauch Chunk Borough, which it has supplied by system entirely separate from that supplying Mauch Chunk (q. v.).

SOURCE AND COLLECTION

Storage reservoir on Ruddle Run, tributary of Lehigh River; watershed area 2 square miles, part owned by company.

Reservoir No. 1, capacity 850,000 gallons, 3,300 feet below source of stream and 227 feet above borough.

Reservoir No. 2, 251,000 gallons, 200 feet below No. 1.

Reservoir No. 3, 535,000 gallons, 2,000 feet below No. 2; 1.5 miles northeast of borough, 105 feet above lowest portion of district supplied.

Artesian well, 800 feet south of No. 3, feeds into it.

Reservoirs Nos. 1 and No. 3 used as distributing reservoirs; No. 2 only used while No. 1 is being cleaned.

DISTRIBUTION

By gravity from distributing reservoir. Supply and distributing mains as follows:

Size (inches),	8	6	4	3 & smaller	Total
Length (miles),	0.9	1.1	1.5	1.9	5.4

Pressures 20 to 72 pounds; 33 fire hydrants, 4-inch.

CONSUMPTION

About 4,000 persons supplied; 751 taps, none metered. Stated average daily consumption 270,000 gallons, all domestic. No means of measurement.

EMAUS BOROUGH, LEHIGH COUNTY

MUNICIPAL WATER WORKS
MOUNTAIN WATER COMPANY

Population 1910 census, 3,501; increase since 1900, 2,033. Estimated 1915, 4,100a.

LOCATION

Southern Lehigh County, on small tributary of Little Lehigh Creek. Connected to Allentown, 6 miles north, by Philadelphia & Reading Ry. and Lehigh Valley Traction Co.

INDUSTRIES

Shirt factory, three silk mills, foundry and machine works, two iron works and cigar factory, over 1,600 employees. Borough covers 1 square mile in extensive farming country.

WATER SUPPLY

(1) Municipal system built 1870.

(2) The Mountain Water Co., incorporated 1891 for Upper Milford Township.

(3) A private system.

(4) A few drilled wells and 200 cisterns.

Since construction of works of Mountain Water Co., that part of township has been taken into borough.

MUNICIPAL WATER WORKS

SOURCE AND COLLECTION

One drilled well known as No. 1; tunnel and four springs in Salisbury Township, on mountainside above borough. Well No. 2, 0.25 mile south of borough line, near pumping station.

Well No. 1, 8-inch diameter and 260 feet deep, yields 187,000 gallons daily. Well No. 2, 8-inch diameter, 112 feet deep, is flowing well and yields 72,000 gallons daily. Tunnel near well No. 2, 4 feet wide, 6 feet high, 200 feet into mountain, with branch 180 feet long, at right angles. Four springs are 1 mile northeast of tunnel.

Pumping station contains one 30 hp. upright boiler, one Sweigart air compressor and one 200,000 gallon Marsh horizontal steam pump. Water from well No. 2 by air-lift into 300,000 gallon steel tank in pumping station; pumped through 4-inch force main to reservoir No. 1, 1.25 miles from and 125 feet above borough, capacity 150,000 gallons. Conduit from tunnel leads to collecting basin which has 4-inch pipe to reservoir No. 1.

Springs Nos. 1 and 2; 4-inch pipe 1,000 feet long to reservoir No. 2, 2.5 miles from and 250 feet above borough. Springs Nos. 3 and 4; 3-inch pipes to reservoir No. 2, capacity 250,000 gallons. Very little flow from springs during drought. All water soft.

DISTRIBUTION

By gravity through 8-inch main from reservoir No. 1, parallel to force main from pumps, connecting to distributing system near pumping station. Gravity main 10-inch, 1 mile long, from reservoir No. 2, connecting to distributing system near eastern borough line. Pressures 35 to 90 pounds.

Ordinarily reservoir No. 1 is in service nearly entire year and No. 2 held in reserve for fire purposes.

Distributing mains 4 miles 3-inch to 6-inch; 36 fire hydrants.

CONSUMPTION

About 3,075 persons supplied; 450 taps, mostly industrial. Consumption 100,000 gallons per day, 3,000 gallons industrial and 97,000 gallons domestic.

COST AND REVENUE

Total cost of works, $35,000; annual operating expenses, $1,350; gross revenue, $4,000.

MOUNTAIN WATER COMPANY

SOURCE AND COLLECTION

(1) Seven springs and tunnel on mountainside in Upper Milford Township within radius of 1 mile from southern borough line; very low flow during droughts. These springs, Fink, Andreas, Meadow, Wagner and Smith, Nos. 1, 2, 3 and tunnel, form one group at

continuation of Sixth Street, south springs being 1,000 to 3,000 feet from others; 2-inch pipes to collecting basin and thence by 3-inch pipes to 40,000 gallon storage reservoir just south of borough line and 100 feet above business section. Tunnel 4 feet wide, 6 feet high and 250 feet into mountain.

(2) Additional supply from two dug wells, 500 feet west of storage reservoir, capacity over 10,000 gallons daily. Pumping station with 10,000 gallon Gould horizontal duplex pump, operated by 5 hp. gasoline engine, pumps through 3-inch discharge to reservoir.

(3) Spring at continuation of Second Street in same general locality as other sources on an independent line from rest of system. All water soft.

DISTRIBUTION

From (1) and (2) through 3-inch gravity main from storage reservoir to borough with 3-inch laterals, 4.2 miles of 3-inch pipe.

From (3) by gravity through 2-inch pipe, 0.33 mile long, supplying two dwellings on Second Street; pressure 65 pounds; one fire hydrant, 3-inch.

CONSUMPTION

Supply to 1,000 persons and one industry; 230 taps, one industrial; no meters. Stated average daily consumption 7,500 gallons, 2% industrial.

EMERALD AND SLATEDALE (WASHINGTON TWP.), LEHIGH COUNTY

WASHINGTON WATER SUPPLY COMPANY
(David Gring and others)

	Slatedale	Emerald
Estimated 1915 population,	800a	600a

LOCATION

Northern Lehigh County, on Trout Creek; along branch of Lehigh R. R. Slate district.

WATER SUPPLY

Washington Water Supply Co., incorporated 1903 for Washington Township; controlled by David Gring and others.

SOURCE AND COLLECTION

A 13,000,000 gallon reservoir near source of Trout Creek at base of Blue Mountains; watershed area 2 square miles; additional source, Perry Springs nearby, owned by company but not used at present. Supply plentiful all year; water soft.

DISTRIBUTION

By gravity through 3.5 miles 20-inch reducing to 16-inch, 12-inch, 10-inch and 8-inch supply mains, principally 10-inch; 3.25 miles distributing mains, principally 8-inch and 3-inch; pressures 65 to 110 pounds; 15 fire hydrants, 4-inch.

CONSUMPTION

About 700 persons supplied; 450 taps, 3 metered. Consumption not known; assuming 30 gallons per capita domestic, would be 21,000 gallons daily; industrial consumption probably 10,000 gallons daily.

HELLERTOWN BOROUGH, NORTHAMPTON COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 950; increase since 1900, 170. Estimated 1915, 1,150a.

LOCATION

Southern Northampton County, on Saucon Creek; on Bethlehem Branch of Philadelphia & Reading Ry.

INDUSTRIES

Saucon plant of Thomas Iron Co., bottling works and stocking factory.

WATER SUPPLY

Municipal works built in 1897. Large number of springs rising in borough furnish individual supplies.

SOURCE AND COLLECTION

Three large springs about 2 miles southeast of borough enclosed in concrete basin. Four-inch pipe leads from spring No. 3 to spring No. 2, and 6-inch pipe from No. 2 to No. 1, from which 10-inch main direct to borough with connection to 2,000,000 gallon storage reservoir nearby used only in emergency.

DISTRIBUTION

By gravity from springs or reservoir as required; maximum pressure 105 pounds. Distributing and supply mains as follows:

Size (inches),	10	8	6	4	Total
Length (miles),	1.2	0.8	0.3	0.4	2.7

Thirty-six fire hydrants, with 4-inch to 10-inch connections to main.

CONSUMPTION

About 1,150 persons supplied; 200 taps. No means of measuring consumption; assuming 50 gallons per capita, would be 58,000 gallons.

LANGHORNE, LANGHORNE MANOR AND S. LANGHORNE BOROUGHS, BUCKS COUNTY

LANGHORNE SPRING WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Langhorne,	895	94	3,500a
Langhorne Manor,	222	52	
South Langhorne,	514	137	

LOCATION

Southern Bucks County, neighboring boroughs on Neshaminy Creek; on New York Division of Phiadelphia & Reading Ry.

WATER SUPPLY

Langhorne Spring Water Co., incorporated 1886 for Langhorne Borough.

SOURCE AND COLLECTION

Three springs at head of Chub Run, tributary of Neshaminy Creek, just west of Langhorne; water piped to two storage reservoirs 500,000 and 100,000 gallons capacity just below springs.

Water from larger reservoir used only in emergencies; water from smaller reservoir pumped by 1,000,000 and 4,000,000 gallon pumps, against 119 ft. head, to 75,000 gallon elevated steel tank 0.5 mile north; two 75 hp. boilers.

DISTRIBUTION

By gravity from tanks. Distributing and supply mains 6.5 miles, principally 6-inch and 4-inch; pressures 20 to 84 pounds; 22 fire hydrants, 2-inch.

CONSUMPTION

About 3,500 persons supplied; 420 taps, 4 metered, 1 being industrial. Average daily consumption determined by pump displacement and meters, 67,000 gallons; maximum 85,000 gallons.

LANSDALE BOROUGH, MONTGOMERY COUNTY

LANSDALE WATER COMPANY

Population 1910 census, 3,551; increase since 1900, 797. Estimated 1915, 4,000a.

LOCATION

Eastern Montgomery County, at headwaters of Neshaminy Creek, along Bethlehem Branch of Philadelphia & Reading Ry. and Lehigh Valley Transit Co. (electric).

INDUSTRIES

Stove works, radiator works, foundry, agricultural works, silk mill, shirt manufacturing company and glue company.

WATER SUPPLY

Lansdale Water Co., incorporated 1882 for Lansdale Borough.

SOURCE AND COLLECTION

By pumping from four drilled wells at east end of borough. Water medium hard.

Well	Diameter inches	Depth feet	Capacity g. p. m.
No. 3,	8	600	60
No. 4,	8	400	50
No. 5,	8	1,100	55
No. 6,	8	500	95

DISTRIBUTION

By gravity through 9.8 miles of mains, as follows:

Size (inches),	8	6	4	1 to 3	Total
Length (miles),	0.1	0.5	7.5	1.7	9.8

Pressures 40 to 44 pounds; 42 fire hydrants, 4-inch.

CONSUMPTION

About 4,000 persons supplied; 900 taps. No means of measurement; assuming 60 gallons per capita, would be 240,000 gallons daily.

LANSFORD AND COALDALE BOROUGHS, CARBON AND SCHUYLKILL COUNTIES; NESQUEHONING AND HAUTO (MAUCH CHUNK TWP.), CARBON COUNTY.

PANTHER VALLEY WATER COMPANY
(Lehigh Coal and Navigation Company)

	Population 1910 census	Increase since 1900	Estimated 1915
Lansford,	8,321	4,888	11,000a
Coaldale,	5,154		6,500a
Nesquehoning,			4,000a
Hauto,			500a

LOCATION

Adjoining boroughs in southwestern Carbon and northeastern Schuylkill counties, at headwaters of Panther Creek, tributary of Little Schuylkill River, and in narrow valley between Sharp Mountain on south and Locust Mountain on north. Along Central R. R. of New Jersey and Lehigh & New England R. R. between Mauch Chunk and Tamaqua; Eastern Pennsylvania Electric Rys. Elevations as follows:

	High	Low
Lansford,	1,225	990
Coaldale,	1,160	950
Nesquehoning,	965	775

INDUSTRIES

The Lehigh Coal and Navigation Co. with 14 mines, 6 collieries and 3 washeries, employing 10,000.

WATER SUPPLY

Panther Valley Water Co., incorporated 1886, owned and controlled by Lehigh Coal and Navigation Co., consisting of sale of property and franchise of following companies in 1907:

Name.	Inc.	Incorporated for
Rahn Township Water Co.,	1900	Rahn Twp., Schuylkill County
Mauch Chunk Township Water Co.,	1900	Mauch Chunk Twp., Carbon County
Nesquehoning Water Co.,	1872	Nesquehoning, Coal and Ashton, Carbon County
Nesquehoning Water Supply Co.,	1899	Carbon and Schuylkill counties, excepting territories of ex-corporations

Furnishes domestic supply to boroughs of Coaldale and Lansford, villages of Nesquehoning and Hauto and mines and breakers of Lehigh Coal and Navigation Co.

Although most of territory supplied lies in Lower Delaware sub-basin, Section No. 3, sources of supply are in Middle Delaware sub-basin, Section No. 2.

SOURCE AND COLLECTION

Six sources of supply: (1) Little Schuylkill River, (2) Bear Creek, (3) Broad Run, (4) Nesquehoning Creek, (5) Deep Run, and (6) drilled wells.

Source	Domestic supply to	Elevation	Drainage area square miles	Capacity of reservoir m. gals.
1. L. Schuylkill River,			40	
2. Bear Creek,	Lansford and Hauto,	1,261		8.0
3. Broad Run,	Coaldale,	1,024		.025
4. Nesquehoning Creek:				
Hauto Lower Dam,		1,025	12	1,078.
Hauto Upper Dam,		1,055		370.
Greenwood Dam,		1,135	2.5	.066
5. Deep Run,	Nesquehoning,	1,132		
6. Drilled well No. 1,		1,015		
Drilled well No. 2,		1,015		
Drilled well No. 3,				

(1) Pumping station and intake No. 1 on east bank of Schuylkill River, in northern part of Tamauqua: two 1,225,000 gallon Goyne horizontal duplex pumps and four 100 hp. horizontal boilers. Water pumped from two 10-inch suctions through 10-inch force main 3 miles, to Coaldale and flume to Tamaqua colliery.

(2) and (3) Bear Creek and Broad Run, tributaries of Nesquehoning Creek; total watershed area 6 square miles: 8,000,000 gallon storage reservoir on Bear Creek, 2 miles north of Lansford and 25,000 gallon storage reservoir on Broad Run, 2 miles northeast of Lansford. New 80,000,000 gallon reservoir with concrete buttress dam under construction on Bear Creek. From Broad Run reservoir through 12-inch wooden pipe line, 260 feet, to storage yard pump station No. 2, containing one 325,000 gallon Worthington horizontal duplex pump with 8-inch suction and two 250 hp. horizontal boilers; thence through 6-inch force main 2 miles to Bear Creek reservoir.

(4) Nesquehoning Creek: Three dams, (1) Hauto Lower at Hauto, junction of Bear Creek with Nesquehoning Creek, watershed area 9 square miles; (2) Hauto Upper, new dam, 1 mile above lower, impounding 1,078,000,000 gallons; (3) Greenwood Dam, 2 miles farther upstream in Schuylkill County, capacity 370,000,000 gallons. Water from Greenwood Dam discharges through four 16-inch pipes into open channel leading to Lower Dam; thence by two 20-inch pipes into swamp, where it is collected into wooden intake box with 16-inch pipe, 800 feet long, to sump of north end pumping station No. 4. A 6-inch wood pipe line 23,000 feet long from headwaters of Nesquehoning Creek to pumping station No. 4, completed July 22, 1914.

Pumping station No. 4, at northern portal of tunnel of Lehigh Coal and Navigation Co. between Lansford and Hauto, contains three 4,250,000 gallon Goyne horizontal duplex pumps, one 200,000 gallon Cameron pump and two Ingersoll air compressors. Worthington and Cameron pumps deliver to a 15 ft. by 50 ft. steel standpipe, capacity 70,000 gallons, on mountainside nearby, through 8-inch, increasing to 10-inch, force main; Goyne pumps discharge through 12-inch and 8-inch force mains laid through railroad tunnel.

(5) Concrete dam on Deep Run, 2 miles northeast of Hauto from 66,000 gallon reservoir 325 feet above Nesquehoning village; watershed area 2.5 square miles.

(6) Drilled well No. 1, with pumping station No. 3, now abandoned 0.25 mile below Bear Creek reservoir on east bank of Creek; 4-inch diameter, 200 feet deep. Other two drilled wells, 4-inch and 8-inch diameter, 600 feet deep, adjacent to pumping station No. 4. All water soft.

DISTRIBUTION

(1) A 10-inch force main from Little Schuylkill River pumping station, 19,240 feet to Coaldale and 1,750 feet 10-inch cast iron pipe and 2,970 feet of wooden flume to Tamaqua colliery.

(2) and (3) A 12-inch, reducing to 8-inch, gravity main from Bear Creek reservoir through railroad tunnel to Lansford.

(4) A 12-inch force main from pumping station No. 4, through tunnel to Coaldale and beyond, reducing finally to 6-inch. An 8-inch, reducing to 6-inch, force main from pumping station No. 4 to Lansford and Mauch Chunk Township. Water from standpipe (bottom being 19 feet lower than Bear Creek reservoir) flows through 10-inch pipe, connecting with gravity supply pipe from Bear Creek reservoir at northern portal of tunnel.

(5) A 10-inch gravity main from reservoir on Deep Run southwesterly 2 miles to Nesquehoning village.

Laterals, 6-inch and 4-inch, in Lansford, Coaldale, Hauto and Nesquehoning and all operations of Lehigh Coal & Navigation Co. Total distributing mains as follows:

Size (inches),	6	4	under 4	Total
Length (miles),	7.1	8.6	1.4	17.1
Per cent.,	42	50	8	100

Pressures 20 to 120 pounds; 66 fire hydrants, 4-inch.

CONSUMPTION

Under ordinary circumstances, Nesquehoning Creek and Schuylkill River water used for industrial purposes at various collieries and power plants, while other supplies used for domestic purposes in Lansford, Coaldale, Hauto and Nesquehoning, connections being left for emergencies, excepting Deep Run supply. Maximum daily consumption 4,500,000 gallons; average daily consumption in 1913, measured by meter, weir and pump displacement, 4,300,000 gallons, as follows:

Place	Connections	Consumers	Consumption (gallons)	
			Domestic	Industrial
Lansford,	1,608	10,500	1,080,000	
Coaldale,	605	6,000		
Nesquehoning,	375	3,000	200,000	2,990,000
Hauto,	50	500	30,000	
			1,310,000	2,990,000
Total,				4,300,000

Metered taps 358, 12 industrial; metered consumption 215,000 gallons industrial and 90,000 gallons domestic.

LEHIGHTON AND WEISSPORT BOROUGHS, CARBON COUNTY

LEHIGHTON WATER SUPPLY COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Lehighton,	5,316	687	6,000a
Weissport,	638	37	700a
Suburbs,			1,000a

LOCATION

Southern Carbon County, 4 miles below Mauch Chunk on opposite sides of Lehigh River; on Central R. R. of New Jersey and Lehigh Valley R. R. Range of elevation in district served 225 feet.

INDUSTRIES

Two planing mills, five silk mills, lace mill, two knitting mills, one shirt factory, meat packing company, two stove works, automatic printing press company, cement building block works, and, just above Lehighton, shops of Lehigh Valley R. R.

WATER SUPPLY

Lehighton Water Supply Co., incorporated 1899 for Carbon County, except the territory covered by the Panther Valley Water Co., the Weatherly Water Co., The Mauch Chunk Water Co., Summit Hill Water Co., and the Silver Brook Water Co. Purchased controlling interest, 1901, in stock of Lehighton Water Co., incorporated 1888 for Lehighton, and Weissport Water Co., incorporated 1893 for Weissport.

SOURCE AND COLLECTION

(1) Two storage reservoirs, 2,500,000 and 3,500,000 gallons capacity on Long Run, tributary of Lehigh River, 3 miles above Lehighton. Lower, No. 1 reservoir, 4 miles from and 50 feet above highest consumers in Lehighton; upper, No. 2, 0.5 mile further up valley and 67 feet higher than No. 1. Watershed area above reservoir No. 1, 0.1 square mile; reservoir No. 1 being reconstructed.

(2) A 500,000 gallon reservoir No. 3, at junction of east and west branches of West Branch of Pine Run, tributary of Big Creek, about 6 miles above its mouth in Lehigh River, 1 mile south of Weissport and 100 feet higher than reservoir No. 2, into which its water is delivered through 12-inch gravity main 3.25 miles long. This reservoir, 6 miles northeast of Weissport, is excellent site for large storage reservoir; watershed area about 4 square miles. All water soft.

DISTRIBUTION

By gravity through 10-inch, reducing to 8-inch, pipe line from reservoir No. 2 and 8-inch line from reservoir No. 1, with connection to a 1,000,000 gallon equalizing reservoir at highest part of district.

Total length, 3.25 miles, 10-inch and 3 miles 8-inch pipe. Distributing mains as follows:

Size (inches),	8	6	4	Total
Length (miles),	1.8	9.5	5.0	16.3
Per cent.,	11	58	31	100

Pressures 75 to 85 pounds; 67 fire hydrants, 4-inch.

CONSUMPTION

Entire population, 7,700, supplied; 1,127 taps, 15 metered, all industrial. Stated average daily consumption, determined by metering industrial, estimating domestic and weiring entire supply, 2,000,000 gallons (1913); maximum 2,500,000 gallons, 30% industrial. Average industrial consumption 600,000 gallons daily in 1913 and 750,000 gallons in 1914, of which 17,000,000 gallons monthly furnished Lehigh Valley R. R.

MACUNGIE BOROUGH, LEHIGH COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 772; increase since 1900, 80. Estimated 1915, 800a.

LOCATION

Southern Lehigh County on Swope Creek, tributary of Little Lehigh Creek, about 8 miles southwest of Allentown and connected thereto by branch of Philadelphia & Reading Ry. and by trolley line. Range of elevation in borough, 50 feet. Agricultural community.

WATER SUPPLY

Municipal works built in 1895.

SOURCE AND COLLECTION

A 212,000 gallon storage reservoir 0.75 mile south of borough on small tributary of Swope Creek fed by springs; watershed area 0.5 square mile. Springs about 150 feet above reservoir, and reservoir 220 feet above center of borough. Water soft.

DISTRIBUTION

By gravity through 0.6 mile 8-inch, 1.6 miles 6-inch and 1.1 miles 4-inch mains; pressures 70 to 95 pounds; 31 fire hydrants, 8-inch.

CONSUMPTION

About 700 persons supplied; 150 taps. Stated average daily consumption 50,000 gallons, 20% industrial. No means of measurement.

COST AND REVENUE

Total cost of works, $20,000; annual operating expenses, $200; gross revenue, $1,300.

MAUCH CHUNK BOROUGH, CARBON COUNTY

MAUCH CHUNK WATER COMPANY
UPPER MAUCH CHUNK WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Mauch Chunk,	3,952	77	4,150a

LOCATION

County seat; central Carbon County, at mouth of Mauch Chunk Creek, Lehigh River; on Lehigh Valley R. R. and Central R. R. of New Jersey; eastern terminus of Switch-back railroad between Mauch Chunk and Summit Hill, oldest in America. Mauch Chunk Borough divided into Mauch Chunk proper and Upper Mauch Chunk, along west bank of Lehigh River.

INDUSTRIES

Mining center.

WATER SUPPLY

(1) Mauch Chunk Water Co., incorporated 1849, supplies First and Third Wards of Mauch Chunk Borough; also supplies, by separate system, East Mauch Chunk Borough (q. v.).

(2) Upper Mauch Chunk Water Co., incorporated by Carbon County 1872, by State 1898, for Upper Mauch Chunk, which comprises second Ward of Mauch Chunk Borough.

MAUCH CHUNK WATER COMPANY

SOURCE AND COLLECTION

Two flowing drilled wells and several springs along Mauch Chunk Creek southwest of Mauch Chunk.

(1) Well No. 1, about 2 miles above borough; water collected by 8-inch pipe into Thompson Spring reservoir (No. 1), 2,000 feet below; 8-inch delivery main to borough.

(2) Well No. 2, near Thompson Spring reservoir; water collected by 8-inch pipe connecting to above 8-inch delivery main some distance below Thompson Spring reservoir.

(3) Several springs along hillside; water collected into Wire Mill reservoir (No. 2), 1 mile above mouth of creek, watershed area 40 acres; and into Catholic reservoir (No. 3) about 1,000 feet farther down-stream, watershed area 50 acres. Reservoir No. 3 is 4 feet lower than reservoir No. 2, discharges into delivery main 70 feet lower down.

To supply portion of borough higher in elevation than reservoir No. 2, is 4-inch branch off delivery main several hundred feet above reservoir No. 2, valve controlled; blow-off connection leading to Mauch Chunk Creek. Any excess from sources Nos. 1 and 2 backs up into reservoirs Nos. 2 and 3.

(4) Auxiliary supply from Mauch Chunk Creek; intake several hundred feet above drilled wells; used only when supply from wells and springs falls short.

All water soft.

DISTRIBUTION

By gravity, wells being about 340 feet above borough. Supply and distributing mains as follows:

Size (inches),	10	8	6	4	3	Total
Length (miles),	0.1	1.0	2.0	0.3	0.8	4.2

Pressures 15 to 60 pounds; 24 fire hydrants, 4-inch.

CONSUMPTION

About 2,000 persons supplied; 409 taps, 4 metered. Stated average daily consumption, 240,000 gallons, all domestic. No means of measurement.

UPPER MAUCH CHUNK WATER COMPANY

SOURCE AND COLLECTION

(1) Water from springs collected into 206,000 gallon reservoir on mountainside 1.25 miles west of borough, north of Mauch Chunk Creek and a few hundred feet east of Thompson Spring reservoir.

(2) Auxiliary supply from 10-inch floating, screened, intake in Mauch Chunk Creek above Thompson Spring reservoir and short distance below intake of Mauch Chunk Water Co.; watershed area, both sources, about 100 acres.

All water soft.

DISTRIBUTION

By gravity from the collecting reservoir, the excess backing up into 178,000 gallon equalizing reservoir on hill just northwest of Upper Mauch Chunk. This equalizing reservoir also receives flow from nearby springs. Supply and distributing mains as follows:

Size (inches),	10 and 8	6	4	3	Total
Length (miles),	0.1	2.8	1.5	0.7	5.1

Pressures, 22 to 95 pounds; 16 fire hydrants, 4-inch.

CONSUMPTION

About 2,150 persons supplied; 632 taps, none metered.

MORRISVILLE BOROUGH, BUCKS COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 2,002; increase since 1900, 631. Estimated 1915, 2,300b

LOCATION

Southeastern Bucks County, on Delaware River opposite Trenton, New Jersey.

INDUSTRIES

Rubber mill and tile works.

WATER SUPPLY

Municipal plant built in 1894.

SOURCE AND COLLECTION

A 10-inch intake in Delaware River to intake well at pumping station. Two pumps of combined capacity 3,500,000 gallons force water to 88,125 gallon standpipe at station and 14,000 gallon standpipe on hill north of borough.

DISTRIBUTION

By gravity from standpipes.

CONSUMPTION

Average daily consumption 850,000 gallons, large part used by Pennsylvania R. R. Railroad also pumps about 1,000,000 gallons daily from Pennsylvania Canal.

NAZARETH, PEN ARGYL AND WIND GAP BOROUGHS, AND WEST PEN ARGYL, PLAINFIELD TWP., NORTHAMPTON COUNTY

BLUE MOUNTAIN CONSOLIDATED WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Nazareth,	3,978	1,674	4,500a
Pen Argyl,	3,967	1,183	5,000a
Wind Gap,	832	121	1,200a
West Pen Argyl,			1,000b

LOCATION

Nazareth, in central Northampton County, on Schoeneck Creek, tributary of Bushkill Creek; Pen Argyl and Wind Gap in northern Northampton County, on Waltz Creek, tributary of Martins Creek. On Delaware, Lackawanna & Western R. R., Lehigh & New England

R. R. and Slate Belt Electric Street Ry. Nazareth on Allen Street Ry., Northampton Traction Co., Lehigh Valley Transit Co. and Easton Transit Co.

INDUSTRIES

Nazareth—Cement mills, silk mill, foundry and knitting mill. Wind Gap and Pen Argyl—Slate quarries, silk mills and shoe factory. West Pen Argyl—Car shops of Lehigh & New England R. R.

WATER SUPPLY

Blue Mountain Consolidated Water Co., incorporated 1902 as merger of following companies:

Name	Inc.	Incorporated for
Nazareth Water Co.,	1870	Nazareth
Pen Argyl Water Co.,	1888	Pen Argyl Borough
Wind Gap Water Co.,	1899	Wind Gap Borough

Territory supplied in Section No. 1; principal source of supply in Section No. 2.

SOURCE AND COLLECTION

Five sources of supply, viz:

(1) Aquashicola Creek, tributary of Lehigh River at Lehigh Gap; 10,000,000 gallon reservoir known as Stony Garden reservoir just north of Monroe-Northampton county line and about 2 miles north of Wind Gap; watershed area 1.9 square miles. Water very soft.

(2) Four drilled wells just below Stony Garden reservoir. Water pumped into 12-inch gravity main from reservoir, by electrically driven deep well pumps, three having a capacity of 288,000 gallons daily each, and one 144,000 gallons.

(3) Aquashicola Creek and three drilled wells 1 mile below Stony Garden reservoir at Ross Common, where small reservoir receives flow from 2.5 square miles of watershed of creek below dam and from wells pumped by deep well pumps driven by compressed air. Water from small reservoir pumped by 1,440,000 gallon Scranton compound steam pump with 125 hp. boiler, into 10-inch force main adjoining 10-inch gravity main from Stony Garden reservoir.

(4) Springs and two drilled wells on south side of Blue Mountain, 1 mile northwest of Pen Argyl. Water from springs flows through 8-inch gravity line 0.5 mile long into 800,000 gallon reservoir just outside of Pen Argyl. Water from two wells near reservoir pumped by two 72,000 gallon electrically driven deep well pumps with discharge into reservoir.

(5) Springs in abandoned quarry near Douglassville about 2.5 miles north of Nazareth; only source of supply for Nazareth prior to 1903. Water from this quarry and well 400 feet deep nearby pumped by two 288,000 gallon electrically driven pumps through 6-inch force mains into 150,000 gallon distributing reservoir in northern part of Nazareth. This supply used only in dry seasons and then only for cement mills.

DISTRIBUTION

From (1), by gravity through 12-inch main and 10-inch main, the 12-inch main extending to Wind Gap, where it reduces to 8-inch, and the 10-inch main extending 1 mile, where it is joined by 10-inch main from Ross Common pumping station and continues to Wind Gap, where it reduces to 8-inch. One 8-inch main continues through Wind Gap to Nazareth, about 9 miles, and feeds 100,000,000 gallon and 150,000 gallon distributing reservoirs used for supply to cement mills. Other 8-inch main branches into 6-inch main through Wind Gap and 8-inch main for distance of 0.5 mile toward Pen Argyl, where it reduces to 6-inch main into Pen Argyl.

From (4), by gravity through 6-inch main to Pen Argyl.

Pressures, in pounds, as follows:

Place	Maximum	Minimum	Average
Nazareth,	95	50	72
Pen Argyl,	110	50	80
Wind Gap,	120	90	105

LENGTH OF DISTRIBUTING MAINS IN MILES

Size (inches),	10	8	6	4	3	2 & smaller	Total
Nazareth,	8.4	1.5	3.1	4.4	0.2	0.1	17.7
Pen Argyl,			2.7	4.4	0.8	0.1	8.0
Wind Gap,		3.7	1.9	0.4	0.8	0.5	7.3
West Pen Argyl,		0.6	0.6				1.2
Total,	8.4	5.8	8.3	9.2	1.8	0.7	34.2

Fifty-eight fire hydrants, 4-inch, and 2 private.

CONSUMPTION

	Nazareth	Pen Argyl	Wind Gap	W. Pen Argyl	Total
Population supplied,	4,100	4,300	1,000	1,000	10,400
Number of domestic taps,	800	750	210	200	1,960
Number of industrial taps,	16	20	6	0	42
Daily domestic metered consumption,	20,000	20,000	10,000		50,000
Daily industrial metered consumption,	530,000	250,000	40,000		820,000
Meters,	36	30	9		75
*Total average daily consumption,	850,000	400,000	100,000	30,000	1,380,000

*Consumption measured by Venturi meters on main supply lines; industrial supply all metered.

Supplies following cement plants: Nazareth Cement Co., 300,000 gallons daily; Phoenix Portland Cement Co., 135,000 gallons daily.

NEWTOWN BOROUGH, BUCKS COUNTY

NEWTOWN ARTESIAN WATER COMPANY

Population 1910 census 1,675, increase since 1900, 212. Estimated 1915, 1,750a

LOCATION

Southeastern Bucks County, on Newtown Creek, tributary of Neshaminy Creek; on Philadelphia & Newtown Branch of Philadelphia & Reading Ry. and Bucks County Electric Ry.

INDUSTRIES

Agricultural community; saw mill. The George School and the Friends' Home are near the borough.

WATER SUPPLY

Newtown Artesian Water Co., incorporated 1888 for Newtown Borough. The George School has its own system, pumping from artesian well.

SOURCE AND COLLECTION

From five drilled wells at eastern edge of borough; water pumped by four deep well pumps, combined capacity 804,000 gallons daily, to 650,000 gallon distributing reservoir located on hill 0.25 mile east of borough. Depth of wells, 228 feet, 112 feet, 177 feet and 339 feet. One well and two pumps kept in reserve; 50 hp. and 150 hp. boilers. Water medium hard.

DISTRIBUTION

By gravity through 5.2 miles of mains as follows:

Size (inches),	8	6	4	3 & smaller	Total
Length (miles),	1.2	1.8	1.8	0.4	5.2

Pressures 25 to 50 pounds; 32 fire hydrants, 3-inch.

CONSUMPTION

About 1,700 persons served; 487 taps, 5 metered, all industrial. Stated consumption 200,000 gallons daily; 75% domestic, 25% industrial. No means of measurement.

PALMERTON BOROUGH AND VILLAGE OF HAZARD (LOWER TOWAMENSING TWP.), CARBON COUNTY

PALMER WATER COMPANY

Estimated population 1915, 6,000

LOCATION

Palmerton, southwestern Carbon County, on Aquashicola Creek about 1 mile above its mouth in Lehigh River; Hazard on Lehigh River, and Central R. R. of New Jersey. Range of elevations in district supplied in Palmerton, 393 to 550 above sea level.

INDUSTRIES

Two plants of New Jersey Zinc Co. of Pennsylvania; cigar factory.

WATER SUPPLY

Supply for Palmerton and Hazard and partial supply for both plants of zinc company furnished by Palmer Water Co., incorporated 1899 for Lower Towamensing Township.

Zinc company has private supply system for industrial purposes at each plant.

SOURCE AND COLLECTION

Domestic supply from one spring and six artesian wells, Nos. 2 to 7, along south side of Aquashicola Creek, east of borough and near east plant. Well No. 1 was a nonproducer and not in use. Hazard well, 6-inch diameter, other wells 8-inch diameter and 300 feet deep in red shale. Hazard well operated by 350 g. p. m. volute pump electrically driven, used only in emergencies. Well No. 7 operated by 150 g. p. m. Downie deep well pump electrically driven, discharging directly into distributing system. Wells Nos. 2 to 6, inclusive,

operated by air lift with McKiernon-Terry compressor. Water flows by gravity into collecting basin into which spring discharges; pumped from collecting basin by 450 g. p. m. Worthington two-stage centrifugal pump into distributing system. Hardness of water averages 50 to 60 parts per million.

Industrial supply by gravity from 32,000,000 gallon reservoir on Pohopoco Creek at Parryville, elevation 578; watershed area 105 square miles; delivered through 3.6 miles 30-inch and 1.6 miles 24-inch and 20-inch mains. Water soft.

DISTRIBUTION

Domestic by pumping and industrial by gravity.

Distributing mains for domestic supply as follows:

Size (inches),	12	10	8	6	4 & smaller	Total
Length (miles),	0.1	2.0	0.6	4.6	2.0	9.3

Pressures 60 to 80 pounds, controlled by 180,000 gallon standpipe, 80 feet in height, base at elevation 498; 45 fire hydrants, 6-inch.

CONSUMPTION

About 4,500 persons supplied; 638 taps; 47 taps metered, 7 industrial. Stated average daily consumption, determined by pump displacement, 11,350,000 gallons, 350,000 domestic. Metered consumption domestic, 47,000 gallons, industrial 11,000,000 gallons.

POCONO LAKE PRESERVE, MONROE COUNTY

POCONO LAKE WATER COMPANY

Estimated 1915 population, 250a (summer)

LOCATION

West central Monroe County; tract of 3,200 acres surrounding and including Pocono Lake, around which are cottages and camps of members of camping club called Pocono Lake Preserve; along Wilkes-Barre and Eastern R. R. Houses 15 to 90 feet above lake.

WATER SUPPLY

Pocono Lake Water Co., incorporated 1909 for Tobyhanna Township.

SOURCE AND COLLECTION

Large spring, 150 feet from lake shore and tributary to Butz Run; water pumped by 2 hp. gasoline engine operating 33 g. p. m. Gould pump and by two Rief hydraulic rams; 3-inch force main to 5,000 gallon tank 90 feet above lake. Water soft.

DISTRIBUTION

By gravity through 3 miles of mains, principally 3-inch; pressures 45 to 50 pounds; no fire hydrants.

CONSUMPTION

About 250 persons supplied in summer; 56 taps. No means of measuring consumption; assuming 40 gallons per capita, would be 10,000 gallons daily, all domestic.

POCONO PINES (TOBYHANNA TWP.), MONROE COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 20a, 250a in summer

LOCATION

Western Monroe County, adjacent to Lake Naomi; on Wilkes-Barre & Eastern R. R. Range in elevation, 30 feet.

INDUSTRIES

Summer resort.

WATER SUPPLY

Private supply owned by F. C. Miller, of Easton, Pa.

SOURCE AND COLLECTION

Pocono Pines Spring; water by gravity to collecting basin: pumped from basin and from well 79 feet deep to 13,500 gallon pressure tank. Pumping installation Kewanee system, consisting of one 100,000 gallon three cylinder pump, one 40,000 gallon single cylinder deep well pump, and one 12 hp. Morse engine. Water soft.

DISTRIBUTION

By pumping through 0.7 mile of mains ¾-inch to 4-inch, principally smaller size; no fire hydrants; pressures 35 to 80 pounds.

CONSUMPTION

About 250 persons served in summer. Consumption, measured by pump displacement, averages 15,000 gallons daily; maximum 20,000. No meters.

QUAKERTOWN BOROUGH, BUCKS COUNTY

QUAKERTOWN WATER COMPANY (The)

Population 1910 census, 3,801, increase since 1900, 787. Estimated 1915, 4,500a

LOCATION

Northwestern Bucks County, on Beaver Run, tributary of Tohickon Creek, 41 miles north of Philadelphia and 16 miles south of Bethlehem; on Bethlehem Branch of Philadelphia & Reading Ry. Borough covers 1 square mile, 50% urban. Range in elevation, 20 feet.

INDUSTRIES

Agriculture community; seven cigar factories, two cigar box factories, planing mill, knitting and silk mill, shoe and harness factory and box works.

WATER SUPPLY

The Quakertown Water Co., incorporated 1893 for Quakertown Borough. One private system; 400 wells and 100 cisterns used for private supply.

SOURCE AND COLLECTION

(1) A 24-inch intake in Tohickon Creek, 1.5 miles north of borough and 4 miles below source; watershed area 6 to 8 square miles. Water flows to pump well 40 feet south of creek.

(2) Two 8-inch artesian wells 150 and 165 feet in depth flow to pump well.

Pumping station equipped with two boilers 40 and 75 hp., two Barr duplex pumps of 1,000,000 and 1,600,000 gallons capacity with 7-inch and 10-inch suctions.

Water pumped through 10-inch force main 3,800 feet long, branching into 2,000 feet of 10-inch main to 1,500,000 gallon distributing reservoir 1.25 miles west of station and 2 miles northwest of borough, and into 10-inch branch to distributing system.

Water treated temporarily by hypochlorite plant at pumping station; designs for mechanical filtration being prepared. Water medium hard.

DISTRIBUTION

By gravity from distributing reservoir. Supply mains 1.1 miles, 10-inch. Distributing mains:

Size (inches),	10	6	4	Total
Length (miles),	2.4	1.5	4.7	8.6

Pressures 35 to 45 pounds; 66 fire hydrants, 4-inch.

CONSUMPTION

About 3,500 persons supplied; 540 taps. Stated average daily consumption, measured by pump displacement, 275,000 gallons; 20 to 25% industrial. No meters.

ROCKPORT (LEHIGH TWP.), CARBON COUNTY

HUNTER RUN WATER COMPANY
(C. R. R. of N. J., subsidiary)

Estimated population 1915, 100a

LOCATION

Northern Carbon County; west side of Lehigh River; on Central R. R. of New Jersey. In mountain ravine with upland valley broadening out to southwest.

WATER SUPPLY

Hunter Run Water Co., incorporated 1900 for Lehigh Township; owned by Central R. R. of New Jersey.

SOURCE AND COLLECTION

Reservoir on Hunter Run, south of village, capacity 75,000 gallons, about 160 feet above village; watershed area about 3 square miles. Minimum flow based on weir test during dry season of November, 1900, 240,000 gallons per day. Water soft.

DISTRIBUTION

By gravity through 0.6 miles 4-inch pipe; pressure about 65 pounds; no fire hydrants.

CONSUMPTION

Supply for railroad use only. Average daily consumption 65,000 gallons, maximum 85,000, based on number of engine tanks filled.

SAYLORSBURG (HAMILTON TWP.), MONROE COUNTY

HAMILTON WATER COMPANY

Estimated 1915 population, 320b

LOCATION

Southern Monroe County, on Saylors Lake; Lehigh & New England R. R.

INDUSTRIES

Brick works; terminus of branch line of Lehigh and New England R. R.

WATER SUPPLY

Hamilton Water Co., incorporated 1904 for Hamilton Township. Village is in Section No. 1, but source of supply in Section No. 2.

SOURCE AND COLLECTION

Intake dam on small run fed by springs 2.5 miles southwest of village.

DISTRIBUTION

By gravity under head of 200 feet.

CONSUMPTION

Average daily consumption 20,000 gallons, 14,000 used by brick works.

SELLERSVILLE BOROUGH, BUCKS COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1572; increase since 1900, 325. Estimated 1915, 2,000a

LOCATION

Western Bucks County, on Branch of Perkiomen Creek; on Philadelphia & Reading Ry., Bethlehem Branch, and Lehigh Valley Transit Co. (electric).

INDUSTRIES

Principally cigar manufacturing, radium mill.

WATER SUPPLY

Municipal works built in 1895. Borough is in Lower Delaware Sub-basin, Section No. 3, but principal source of supply is in Middle Delaware Sub-basin, Section No. 2.

SOURCE AND COLLECTION

(1) A 6,500,000 gallon storage reservoir formed by dam across Kinseys Creek, tributary of Three Mile Run, about 0.5 mile below source and 2.25 miles north of borough; area of watershed, 1 square mile. Water flows by gravity through 1.5 miles of 6-inch pipe to 1,000,000 gallon distributing reservoir about 0.75 mile north of borough; 30 feet lower than storage reservoir.

(2) Two drilled wells and three springs near storage reservoir. Water from two springs near storage reservoir and from other

spring 0.5 mile west of it piped to storage reservoir. Water from one well pumped into storage reservoir; water from second well pumped to distributing reservoir. Pumping installation:

One 60 g. p. m. Gould pump and one gasoline engine at storage reservoir; one 80 g. p. m. Keystone pump and one electric motor at distributing reservoir. This source only used as an auxiliary supply. Water soft.

DISTRIBUTION

By gravity through 5 miles of distributing mains as follows:

Size (inches)	8	6	4	Total
Length (miles),	2	0.8	2.2	5

Pressures 65 to 90 pounds; 35 fire hydrants, 6-inch.

CONSUMPTION

About 1,850 persons served; 400 taps, 7 metered. Stated daily consumption 125,000 gallons, 50% domestic and 50% industrial. No means of measurement. Metered consumption 45,000 gallons daily, industrial.

COST AND REVENUE

Total cost of works, $50,000; operating expenses, $200; gross revenue, $4,000.

SLATINGTON BOROUGH, LEHIGH COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 4,454; increase since 1900, 681. Estimated 1915, 4,800a

LOCATION

Northern corner Lehigh County, foot of Blue Ridge Mountains, on Lehigh River; along Lehigh Valley R. R.

INDUSTRIES

Silk mill.

WATER SUPPLY

Water works built 1861 by Slatington Water Co. and purchased by borough 1883.

SOURCE AND COLLECTION

Numerous springs flowing out of foothills of Blue Ridge Mountains; water collected into two reservoirs about 1.75 miles northwest of borough; upper group of springs about 34 feet above intake of upper reservoir; lower springs about 40 feet above lower intake. Upper reservoir, capacity 162,000 gallons, about 30 feet above lower reservoir, which is 160 feet above center of borough and 60 feet lower than southern boundary line; capacity 260,000 gallons. Minimum flow in gallons per day by actual weir measurement August 10th, 1912, as follows: Upper reservoir, 464,000, lower reservoir, 133,000. Water soft.

DISTRIBUTION

By gravity through 1.75 miles of 14-inch main from reservoir; 7 miles of 8-inch, 6-inch and 4-inch distributing mains, principally 6-inch; pressures 50 to 72 pounds; 57 fire hydrants, 4-inch.

CONSUMPTION

About 5,000 persons (some outside of borough) supplied; 1200 taps. Stated daily consumption 600,000 gallons; maximum 800,000 gallons; 90% domestic, 10% industrial. No means of measurement.

COST AND REVENUE

Total cost of works, $45,000; annual operating expenses, $1,230; gross revenue, $7,930.

SOUTH BETHLEHEM, FOUNTAIN HILL, NORTHAMPTON HEIGHTS AND PART OF BEHLEHEM BOROUGHS, AND NEIGHBORING VILLAGES, LEHIGH AND NORTHAMPTON COUNTIES

BETHLEHEM CITY WATER COMPANY

Place	Population 1910 census	Increase since 1900	Estimated 1915
Northampton County			
South Bethlehem,†	19,973	6,732	23,000
Northampton Heights Borough,	1,037	*	1,200
Lower Saucon Township (portion),			400
Lehigh Coke Co., Settlement,			600
Lehigh County			
Bethlehem Borough (part),	**		(5,000)
Fountain Hill Borough,	1,388	174	1,500
Salisbury Township (portion,			700
Hanover Township			
Rittersville Village,			800
Homeopathic State Hospital,			(1,000)

*Incorporated out of Lower Saucon Township in 1901.
**Known as West Bethlehem Borough before annexation to Bethlehem Borough in 1904.
†1915 court decision makes South Bethlehem a borough instead of a city.

LOCATION

Southern Northampton County and eastern Lehigh County, extending along Lehigh River from South Bethlehem about 1 mile east to Northampton Heights and westward 5 miles to easterly limits of Allentown (formerly East Allentown Borough).

On south bank of Lehigh River; South Bethlehem adjoined on west by Fountain Hill Borough, and on east by Northampton Heights Borough; South Bethlehem and Northampton Heights, in Lower Saucon Township, Northampton County; Fountain Hill in Salisbury Township, Lehigh County, extending as far west as Allentown.

Opposite and on north bank is Bethlehem Borough, made up of Old Bethlehem Borough, incorporated out of Bethlehem Township; and to west, West Bethlehem Borough, incorporated out of Hanover Township. Hanover Township extends westerly beyond Allentown, and in it are Rittersville Village and Homeopathic State Hospital.

On Central R. R. of New Jersey, Lehigh Valley, Philadelphia & Reading, Lehigh Coal & Navigation Co.'s Canal, Lehigh & New England R. R. and Lehigh Valley Transit line (electric).

INDUSTRIES

Bethlehem Steel Co., New Jersey Zinc Co., Lehigh Coke Co., silk and textile mills, several breweries, foundries and machine shops, structural steel works.

WATER SUPPLY

Bethlehem City Water Co. (new), incorporated 1914 as Bethlehem Water Co. for Salisbury Township, Lehigh County; name changed 1914 to Bethlehem City Water Co. Controlled by stock ownership (old).

(1) The Bethlehem City Water Co. (old), incorporated 1903 for Bethlehem Township, Northampton County.

(2) The Hanover Water Co., incorporated 1914 for Hanover Township, Lehigh County.

The former was a consolidation effected through purchase of Bethlehem Consolidated Water Co., a merger in 1902 of—

(a) The Bethlehem Consolidated Water Co., incorporated 1902 for Bethlehem Township, Northampton County.

(b) The Bethlehem, South, Gas and Water Co., incorporated 1864 for South Bethlehem and villages in Lower Saucon, Salisbury and Hanover townships, Lehigh and Northampton counties.

(c) The Mountain Water Co., incorporated 1893 for South Bethlehem Borough, Northampton County.

Total population in district covered by charters 41,781. With one small exception this territory, consisting of separate communities, is served through one connected system of pipes.

SOURCE AND COLLECTION

(1) Small portion of Lower Saucon Township, south of Fountain Hill Borough, population 250, at elevation too great to be served by main plant, secures its supply from works of old Mountain Water Co. Water from several springs on mountainside near Seidersville Village, 2 miles south of South Bethlehem, collected through 6-inch gravity main 1,000 feet long to 300,000 gallon storage reservoir.

(2) Main supply obtained from Lehigh River and from several springs nearby. Pumping station in Salisbury Township, on south bank of Lehigh River about 1.1 miles upstream from westerly limits of South Bethlehem. Water taken from midstream through 48-inch intake pipe which discharges into suction well sunk in rock under floor of pumping station. Copious springs issue in bottom of pump well and additional springs on hillside above station are piped to it; about 75% of entire supply obtained from these springs. Pumping station installation: 5,000,000 gallon Holly pump, reconstructed 1908; 7,000,000 gallon Jeanesville pump, installed 1908; two batteries of Babcock and Wilcox boilers, 250 hp. each set.

Pumps operated above rated capacity, Holly pump up to 7,000,000 gallons daily and Jeanesville up to 10,000,000 gallons daily; station in operation 21 hours daily.

Water pumped through single 24-inch, reducing to 20-inch and 16-inch, force main 5,400 feet long, against head of 265 feet, to 12,000,000 gallon raw water reservoir on hill in Fountain Hill Borough, west of South Bethlehem, about level with upper limits of city and about 250 feet above lower portion. This reservoir will hold 20,000,000 gallons, but is not filled for fear of possible cracking and leakage.

Water treated with alum at certain periods of year, to precipitate suspended matter; applied at pumping station, precipitation taking place in raw water reservoir.

FILTERS

Filters and clear water basin near raw water reservoir. From raw water basin water passes through six preliminary filters of coke and crushed slag, thence through 8-inch pipes to six slow sand filters with area of 0.33 acre operated at rate of about 12,000,000 gallons per acre per day. Preliminary filters said to remove about 68% of bacteria before water passes to sand filters.

Water passes from filters through 20-inch effluent pipe to 6,000,000 gallon filtered water reservoir 20 feet lower than raw water reservoir. Hypochlorite applied to effluent from filters at varying rates, according to requirements.

DISTRIBUTION

By gravity, from (1) through 6-inch main 2 miles long, and by gravity from (2); no physical connection between two supplies.

From filtered water basin two discharge mains, 20-inch and 16-inch reducing and branching out into smaller sizes, distribute water on both sides of river.

On south, two trunk mains, 16-inch and 10-inch, lead into center of South Bethlehem, from which 10-inch and 8-inch continue for over a mile to end of district, supplying Fountain Hill, South Bethlehem, Northampton Heights and portion of Lower Saucon Township.

On north, two 12-inch mains fed by 16-inch main from reservoir cross under Lehigh River and combine into an 8-inch in West Bethlehem. A 6-inch line crossing river farther east feeds into same place. The water, after passing through West Bethlehem mains, issues into 8-inch line, continuing through Hanover Township to outskirts of East Allentown, supplying Rittersville and population along line in

Hanover Township. Two 6-inch branch mains near Rittersville extend 1100 feet uphill to supply Homeopathic State Hospital. Distributing mains as follows:

Size (inches), ------	20	16	12	10	8	6	4	less than 4	Total
Length (miles), ----	0.4	1.5	0.6	1.9	7.3	20.1	9.8	4.0	45.6
Per cent., ----------	(	10		)	16	44	22	8	100

Pressures 10 to 145 pounds; about 140 fire hydrants.

CONSUMPTION

About 30,675 persons supplied; about 4,140 taps, 20 metered. Throughout most of year 75% of supply comes from springs at pumping station, but during droughts, most of supply obtained from river. Average daily consumption, including water used for washing filters, determined by pump displacement, stated to be 4,500,000 gallons; maximum over 5,000,000 gallons; about 780,000 gallons used on north side of river, as follows: West Bethlehem, 500,000; Homeopathic State Hospital, 230,000; Rittersville, 50,000.

HOMEOPATHIC STATE HOSPITAL

Water from two sources: (1) Bethlehem City Water Co. by gravity to 200,000 gallon receiving basin at elevation 418, near pumping station, on hospital grounds, from which it is pumped to distributing reservoir at elevation 526; built and maintained by institution, distributed by gravity; amount supplied about 230,000 gallons daily, metered. Supply, at times has been insufficient and at too low pressure to meet needs. (2) About 35,000 gallons daily pumped by air lift from artesian well on hospital grounds. Proposed to increase supply from this source by installing deep well pump.

LEHIGH UNIVERSITY

Water for domestic purposes pumped from end of water company's main by centrifugal pump owned by college, discharging into two 15,000 gallon covered wooden tanks on university property. Water for fire protection obtained from works of old Mountain Water Co.

GENERAL

Bethlehem City Water Co., supplied East Allentown until about June, 1914, when works in that district were sold to Allentown City.

An additional 16-inch main is being laid by Lehigh Valley R. R. across Lehigh River to replace 12-inch main buried in refilling certain lands along river.

Proposed soon to make extensive improvements in system by increasing filter capacity, establishing high service supply and extending and enlarging mains.

SPRINGTOWN (SPRINGFIELD TWP.), BUCKS COUNTY

SPRINGTOWN WATER COMPANY

Estimated population 1915, 250a

LOCATION

Northern Bucks County, on Cooks Creek.

INDUSTRIES

Entirely agricultural. Smallest community in county having public water supply.

WATER SUPPLY

Springtown Water Co., incorporated 1895 for Springtown.

SOURCE AND COLLECTION

Water collected from three springs rising in mountain about 1 mile north of village. Water soft.

DISTRIBUTION

By gravity through about 1 mile of pipe from springs to distributing system; about 0.75 mile of distributing mains. Surplus water backs up into 14,500 gallon reservoir about 65 feet above village; pressure about 100 pounds; no fire hydrants.

CONSUMPTION

About 75% of population supplied; 41 taps. No means of measuring consumption; assuming 20 gallons per capita, would be about 3,800 gallons per day.

STOCKTON (HAZLE TWP.), LUZERNE COUNTY

WYOMING VALLEY WATER SUPPLY COMPANY
(Lehigh Valley Coal Company)

Estimated 1915 population, 100a

LOCATION

Southern Luzerne County, Hazle Township, on Hazle Creek, tributary of Black Creek and 2.5 miles east of Hazleton; on Lehigh Valley R. R.

INDUSTRIES

Mining village of Lehigh Valley Coal Co.

WATER SUPPLY

Wyoming Valley Water Supply Co., Hazleton Department, subsidiary of Lehigh Valley Coal Co. (Complete description under Hazleton, Section No. 5). Leased in 1910 the Drifton Water Co., incorporated 1893 for Hazle Township, and has separate system for supply of Stockton.

SOURCE AND COLLECTION

Spring just above village.

CONSUMPTION

Supply to 100 people. No means of measuring consumption; assuming 30 gallons per capita, would be 3,000 gallons daily, all domestic.

Supply pumped from drilled wells to collieries not used now.

SUMMIT HILL BOROUGH, CARBON COUNTY

SUMMIT HILL WATER COMPANY

Population 1910 census, 4,209; increase since 1900, 1,223. Estimated 1915, 4,500a

LOCATION

Southwestern Carbon County, at headwaters of Mauch Chunk Creek, western terminus of Mauch Chunk, Summit Hill and Switchback R. R. Elevations 1,470 to 1,540 feet.

INDUSTRIES

Residents mostly employees of Lehigh Coal and Navigation Co.; one planing mill.

WATER SUPPLY

Summit Hill Water Co., incorporated 1876 for Summit Hill Borough.

SOURCE AND COLLECTION

Water pumped from drilled well 340 feet deep at Bloomingdale on Mauch Chunk Creek about 0.5 mile southeast of borough and from a number of springs nearby; creek also used as auxiliary supply. Water delivered through 0.5 mile of 8-inch main to 300,000 gallon distributing reservoir at southern edge of borough, elevation 1654. Pumping installation one 300 g. p. m. Goyne pump; one 100 g. p. m. Carter and Allen pump (emergency); two 150 hp. and one 120 hp. Erie boilers. Water soft.

DISTRIBUTION

By gravity through about 4.2 miles of distributing mains, as follows:

Size (inches),	8	6	4	3	Total
Length (miles),	0.5	0.6	2.8	0.3	4.2

Pressures 15 to 25 pounds; 21 fire hydrants.

CONSUMPTION

About 4,000 persons served; 600 taps, 26 metered, 1 industrial. Stated daily consumption, measured by pump displacement, 200,000 gallons; maximum 216,000 gallons, all domestic.

TOBYHANNA (COOLBAUGH TWP.), MONROE COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 800a

LOCATION

Northwestern Monroe County, on Tobyhanna Creek; on Delaware, Lackawanna & Western R. R. Range in elevation about 60 feet.

INDUSTRIES

Principally cutting and storing ice; small silk mill, souvenir and novelty company. Summer population greatly increased by proximity of practice grounds of United States Field Artillery Corps.

WATER SUPPLY

Private system of N. S. Brittain, installed 1901. Government reservation has private supply from wells.

SOURCE AND COLLECTION

Water pumped from 6-inch drilled well, 176 feet deep on high ground just south of center of village, through 10 feet of 2-inch pipe to 20,000 gallon distributing reservoir; reported yield of well about 25,000 gallons daily. Pumping installation 15 g. p. m. pump operated by 2 hp. Otto gasoline engine, 9 g. p. m. windmill.

DISTRIBUTION

By gravity through 350 feet of 3-inch pipe with 0.4 mile 2-inch and 0.5 mile 1½-inch laterals; pressures 1 to 30 pounds; no fire hydrants.

CONSUMPTION

About 260 persons supplied; 75 taps. Stated average daily consumption, estimated by fall in reservoir, about 5,000 gallons; maximum 6,000 gallons, all domestic. No meters.

TOPTON BOROUGH, BERKS COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 809, increase since 1900, 267. Estimated 1915, 1,100a

LOCATION

Eastern Berks County, on Toad Creek, tributary of Little Lehigh Creek near its source; along Philadelphia & Reading Ry., East Penn Branch.

INDUSTRIES

Furnace, silk mill, foundry, hosiery mill, underwear factory, cabinet works, planing mill and flour mill.

WATER SUPPLY

Municipal works built in 1893.

SOURCE AND COLLECTION

Five springs 1.5 miles southeast of borough and one artesian well near reservoirs; water piped into two adjacent reservoirs having combined capacity 350,000 gallons. Flow from springs decreases considerably in summer and it is necessary to pump from well. Pumping installation a 50 g. p. m., pump operated by 4 hp. oil engine. Water soft.

DISTRIBUTION

By gravity through 2.5 miles of 6-inch and 0.7 mile of 4-inch pipe; pressure about 100 pounds; 37 fire hydrants, 4-inch.

CONSUMPTION

About 1,100 persons supplied; 266 taps. Stated average daily consumption 50,400 gallons. No means of measurement.

WALNUTPORT BOROUGH, NORTHAMPTON COUNTY

BLUE RIDGE WATER SUPPLY COMPANY

Population 1910 census, 1,039, inc. 1901. Estimated 1915 population, 1,100b

LOCATION

Along Lehigh River, in northwestern corner of Northampton County, opposite Slatington Borough; on Central R. R. of New Jersey.

INDUSTRIES

Residents principally employees of slate quarries in neighborhood; silk mill.

WATER SUPPLY

Blue Ridge Water Supply Co., incorporated 1902.

SOURCE AND COLLECTION

Springs rising in Blue Mountain, 1 mile north of borough; water collected into two reservoirs of 1,000,000 and 800,000 gallons capacity, about 247 and 265 feet above lowest portion of district supplied; watershed areas 15 acres and 8 acres. Water soft.

DISTRIBUTION

Six-inch gravity main 2.25 miles from reservoirs to borough. Distributing mains, 1 mile 4-inch; pressures 110 to 120 pounds; 5 fire hydrants, 3-inch.

CONSUMPTION

About 700 persons supplied; 80 taps. Stated consumption 90,000 gallons daily, 25% domestic. No means of measuring. One tap to Central R. R. of New Jersey metered; consumption 66,000 gallons daily. During droughts railroad pumps from Lehigh Coal and Navigation Co.'s canal.

WEATHERLY BOROUGH, CARBON COUNTY

WEATHERLY WATER COMPANY

Population 1910 census, 2,501; increase since 1900, 30. Estimated 1915, 2,480

LOCATION

Northwestern Carbon County, at junction of Quakake and Black Creeks, tributary to Lehigh River; on Lehigh Valley R. R.

INDUSTRIES

Silk mill, frog shop of Lehigh Valley R. R., candy factory, steel works and foundry, electric lighting plant.

WATER SUPPLY

Weatherly Water Co., incorporated 1882 for Weatherly Borough.

SOURCE AND COLLECTION

Penrose Run, tributary of Hazle Creek, 10,000,000 gallon storage reservoir about 2.5 miles northwest of borough; watershed area 2.5 square miles. Water delivered by gravity from storage reservoir to 750,000 gallon distributing reservoir near borough through 3.4 miles 8-inch and 5-inch mains; elevation of springs 1,390, Penrose reservoir 1,339, and distributing reservoir 1,305. Water soft.

New construction is now under way whereby draft from storage reservoir will be discontinued and water drawn from a 30,000 gallon collecting basin adjacent thereto. This basin will receive flow from a new 500,000 gallon intake just above reservoir through 10-inch pipe, 1,340 feet long and from spring 350 feet away, which now discharges into reservoir.

DISTRIBUTION

Distributing mains as follows:

Size (inches),	8	6	4	Total
Length (miles),	0.5	1.0	4.0	5.5

Distributing mains as follows:

CONSUMPTION

About 2,100 persons supplied; 461 taps, 1 metered. Stated average daily consumption 60,000 gallons; maximum 70,000 gallons, 50% domestic and 50% industrial. No means of measurement. Metered consumption about 1,100 gallons daily, industrial.

WHITE HAVEN BOROUGH, LUZERNE COUNTY

WHITE HAVEN WATER COMPANY

Population 1910 census, 1,438; decrease since 1900, 79. Estimated 1915, 1,500a

LOCATION

Southeastern Luzerne County, on Lehigh River; on Lehigh Valley R. R. and Central R. R. of New Jersey. Range of elevation 150 feet.

INDUSTRIES

Railroad and manufacturing town; foundry, printing house and silk mill. Near borough is Pennsylvania State Sanatorium and four private sanatoria.

WATER SUPPLY

White Haven Water Co., incorporated 1885 for White Haven Borough.

SOURCE AND COLLECTION

(1) Small tributary of Linesville Creek, 2,000,000 gallon reservoir 0.25 mile below source; watershed area 50 acres; two drilled wells 600 feet deep just above reservoir, water pumped by air lift; equipment Snyder-Hughes air compressor, 35 hp. boiler. Wells used for auxiliary purposes.

(2) Small reservoirs of 20,000 gallons capacity, impounding several springs flowing out of mountain about 1 mile west of borough and from hill just north of borough; watershed area about 50 acres.

Large reservoir about 160 feet above lowest point supplied and small reservoir about 110 feet.

(3) Water furnished railroads by borough for engine use pumped from Lehigh River by 20 hp. turbine water wheel, used only in emergencies.

DISTRIBUTION

By gravity through 1.5 miles of 8-inch mains to borough. Distributing mains as follows:

Size (inches),	6	4	3	2	Total
Length (miles),	0.1	0.7	1.9	0.5	3.2

Pressures 20 to 65 pounds; no fire hydrants on water mains; 13 fire hydrants on dry pipe lines supplied by fire engines pumping from tank under engine house.

CONSUMPTION

Supply to 1,200 persons; 278 taps, 7 metered, 2 industrial. No means of measuring consumption; assuming 50 gallons per capita, would be 60,000 gallons per day.

INDUSTRIAL SUPPLIES

Foundry and silk mill probably obtain their supply for boilers and engines by pumping from drilled wells.

WHITE HAVEN SANATORIUM, LUZERNE COUNTY

STATE INSTITUTION SUPPLY

Estimated population, 250a

LOCATION

Southeastern Luzerne County on hill south of White Haven Borough, along Lehigh River.

WATER SUPPLY

Private system installed 1903.

SOURCE AND COLLECTION

(1) Springs rising on hillside; water collected into 800,000 gallon reservoir at elevation 1700; 300 feet above buildings. Furnishes sufficient supply 3 months in year.

(2) Two drilled wells, one on hillside above sanatorium and one at base of hill along Linesville Creek. Water raised by air lift, flows into small collecting basin near lower well, from which it is pumped through 1,700 feet of 5-inch force main to two 25,000 gallon tanks on hillside 70 feet above sanatorium. Lower well yields 30 to 40 gallons per minute, uniform, upper well yields 15 to 70 gallons per minute, variable. Pumping equipment, Sweigart double stage air compressor, 175 hp. Heine boiler, two 125 hp. Coatesville boilers, two C. & C. dynamos (used for lighting only), and two 300,000 gallon Scranton pumps.

Pumping station also generates heat, light, steam and power for buildings.

(3) Springs collected into 600,000 gallon reservoir furnish sufficient supply during 7 months in year.

DISTRIBUTION

By gravity from all three sources through 1,200 feet of 3-inch main; pressures 15 to 35 pounds; one fire hydrant, 3-inch.

CONSUMPTION

Supply to 250 persons; 30 taps. Stated average daily consumption, measured by fall of water in tanks, 40,000 gallons; maximum 43,000 gallons; all domestic.

YARDLEY BOROUGH, BUCKS COUNTY

YARDLEY WATER AND POWER COMPANY

Population 1910 census, 894; increase since 1900, 180. Estimated 1915, 1300a

LOCATION

Southeastern Bucks County, on west side of Delaware River at mouth of Brock Creek; on New York Division of Philadelphia & Reading Ry. and Trenton, New Hope & Lambertville Street Railway.

INDUSTRIES

Yardley Flour Mills Co., Cold Spring Bleachery.

WATER SUPPLY

Yardley Water and Power Co., incorporated 1900 for Yardley Borough.

SOURCE AND COLLECTION

Water pumped from drilled well 250 feet deep near Brock Creek and from Brock Creek by 15-inch water wheel generating 45 hp. under head of 26 feet through 6-inch main to 30,000 gallon distributing reservoir. Water soft.

DISTRIBUTION

By gravity through 3.0 miles of 6-inch main; pressure 45 pounds; 28 fire hydrants, 3-inch.

CONSUMPTION

About 500 persons supplied; 135 taps. Stated daily consumption about 80,000 gallons all domestic. No means of measurement.

SECTION No. 3

DELAWARE RIVER

LOWER DELAWARE SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

Table of Industrial Water Supplies (Coal Companies)

SECTION No. 3

DELAWARE RIVER, LOWER DELAWARE SUB-BASIN

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section is in the extreme southeastern part of Pennsylvania, southwest of the Middle Delaware and east of the Lower Main Susquehanna sub-basins. It is about 80 miles long north and south, averaging a little over 30 miles in width, and has an area of 2,717 square miles, or about 6% of the State. Drained by Delaware River below mouth of Poquessing Creek, on boundary between Philadelphia and Bucks counties.

It includes all of Philadelphia and Delaware counties, the greater portion of Berks, Montgomery and Chester counties, and portions of Schuylkill, Lehigh, Bucks, Carbon, Lebanon and Lancaster counties.

SURFACE CHARACTERISTICS

The boundary line between Schuylkill and Berks counties is the southernmost ridge of the Allegheny Mountains. North of this line, in Schuylkill County, is a rough, mountainous region, while south is a flat region with low hills down to the Delaware River and Philadelphia. It drains into the Delaware from the northwest, principally through the Schuylkill River, which traverses the section longitudinally and empties into the Delaware at Philadelphia. Principal tributaries are the Schuylkill River, Poquessing, Pennypack, Saucony, Darby, Crum, Chester, Brandywine and Christiana creeks.

POPULATION

The population in 1910 was considerably over 2,233,000, an increase of about 20% since 1900. The density of population is 822 per square mile, increasing from 263 in Schuylkill and Berks counties to 10,610 in Philadelphia County. Urban population is 84%.

RESOURCES AND INDUSTRIES

A strip about 10 miles wide across the extreme northern portion is devoted to coal mining. The greater part of the section south of

this region is a prosperous agricultural district, with many iron and steel manufacturing plants along the Schuylkill River around Reading, to the west of that city along the Philadelphia and Reading Ry., and south to Philadelphia, along the river which is paralleled by the Schuylkill Navigation Co.'s canal and the Reading and the Pennsylvania railroads. In and around Philadelphia are great numbers of large and small manufacturing plants, which make this one of the most important industrial centers in the United States.

WATER SUPPLY

The conditions as to water supply are probably the most troublesome in the northerly portion, comprising the coal regions. The drought of the fall of 1914 caused much shortage of water supplies and retarded mining operations. In this high region near the headwaters of the watercourses the streams as a rule are comparatively small and without much storage development. The shifting of mining operations, the caving of the surface over mine workings, the existence of coal which may be later mined under reservoir sites, all operate to retard the construction of large storage reservoirs.

There is apparently water in considerable quantity available for water supply in the remainder of this section, at least for the near future. The comparatively large population, however, even in the rural districts, causes pollution of the waters, thus necessitating purification. This is now the case in those systems drawing from the Schuylkill and Delaware and from smaller streams used for supplies in and about Philadelphia.

The greatest use of water occurs in Philadelphia and its suburbs, up the Schuylkill to and beyond Reading, including Pottstown, Phoenixville, Royersford and Norristown boroughs, all of them pumping and filtering supplies from the river; also east and west of Reading, along the railroads, and in the northern part of the section in Pottsville and the surrounding coal regions.

The remainder of this section has few water supplies. It is an agricultural region where the population is too scattered to warrant public works. There are numerous undeveloped streams in these districts; but probably the water would require purification, and the cost of obtaining land and water rights would be high.

The sources of supply are about equally divided as to number between underground and surface, although in point of quantity the former is only a small part of the total furnished by public systems. The same is true of the use of gravity or pumping for delivery of supply, i. e., they are about equal in number but only a small percentage of the total quantity is by gravity. This is so because all the large places—Philadelphia, Reading and others—pump their water.

Out of 69 systems 16 are municipally owned, representing about 90% of the total population supplied. Philadelphia and Reading have municipally owned systems. Filters are numerous because the watersheds of the streams are highly populated, and in the larger places the streams receive industrial wastes. The aggregate population served by water supply systems is about 2,149,000.

There is frequent use of water power, gas and gasoline engines and electric motors for operating pumps. Two plants have gas producers in connection with gas engines. Air lift for deep wells is used in three instances.

Philadelphia takes its supply from the Schuylkill and Delaware rivers to the total amount of 287,000,000 gallons per day, and in the proportion of one-third and two-thirds respectively.

PUBLIC SYSTEMS

Many suburban communities around Philadelphia, with a population of about 131,000, are supplied by the system of the Springfield Consolidated Water Co. from Crum, Pickering and Neshaminy creeks, with combined watershed areas of about 280 square miles and with practically no storage development. The total consumption is about 8,000,000 gallons. All water is filtered and pumped.

The Philadelphia and Bristol Water Co. supplies about 27,000 population in the territory in the northeast part of Philadelphia along the Delaware River, comprising the Thirty-fifth and Forty-first wards. It utilizes Pennypack Creek, with 52 square miles of watershed without storage development, and the Delaware River. Filtration and pumping are required, and the consumption is nearly 2,000,000 gallons.

Another system worthy of note is that of the Pottsville Water Co. in Pottsville and vicinity, serving a population of about 35,000 in five boroughs separated by considerable distances, and hence operating over a territory of perhaps 10 square miles. The average daily consumption is 5,000,000 gallons.

There are several small separate systems in the neighborhood of Reading under the ownership or operating management of H. E. Ahrens, of Reading.

INDUSTRIAL

The Pennsylvania R. R. uses about 7,000,000 gallons daily, of which one-third is from privately owned systems and the remainder from public systems. The Philadelphia & Reading Ry. uses nearly 10,000,000 gallons daily, about equally divided as to source between private and public systems. The Lehigh Valley and Baltimore &

Ohio railroads use a total of about 800,000 gallons, also divided about equally between private and public systems.

The larger miscellaneous industries, principally iron and steel, from which returns were received, show a total consumption from private systems of 91,000,000 gallons per day, taken largely from the Schuylkill River and smaller streams. About half of this is consumed by plants in Philadelphia. The supplies reported from private sources of the coal companies is small, amounting to less than 1,000,000 gallons. The total industrial use from both public and private systems is 246,000,000 gallons.

The following tables give a summary of the water supplies in this section, both domestic and industrial, and are followed by detailed descriptions of the water supply systems arranged alphabetically according to places supplied:

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 3

Place	County	Ownership or Control	Population 1915	Population Supplied	City Company	City Municipal	Borough Company	Borough Municipal	Borough Private	Village Company	Village Private
Ambler,	Montgomery,	Ambler Spring W. Co.,	3,400	5,000			1				
Upper Dublin Twp.,											
Auburn,	Schuylkill,	The Auburn W. Co.,	950	750			1				
Avondale,	Chester,	Avondale W. Co.,	700	500			1				
Birdsboro,	Berks,	Birdsboro W. Co.,	3,100	2,700			1				
Bowers Station,	Berks, Maxatawny Twp.,	Flint Hill W. Co.,	200	200						1	
Boyertown,	Berks,	Municipal,	3,600	3,400				1			
Brockton,	Schuylkill, Schuylkill Twp.,	Moss Glen W. Co.,	400	180						1	
Chester,											
Chester Twp.,											
Lower Chichester Twp.,	Delaware,	The New Chester W. Co.,	42,000	55,000	1						
Marcus Hook,			1,700b				—				
Upland,			2,300b								
Coatesville,	Chester,	Municipal,	13,912x	13,900b				1			
Downingtown,	Chester,	Municipal,	3,500	3,400				1			
East Greenville,	Montgomery,	Municipal,	1,700	1,500				1			
Esterly,	Berks, Exeter Twp.,	Private (Amos Reiff),	200b	120							1
Fleetwood,	Berks,	Municipal,	1,500b	1,000b				1			
Glenside,	Berks, Spring Twp.,	Glenside W. Co.,	550	550						1	
Grand View Sanatorium,	Berks, Lower Heidelberg Twp.,	Private,	(20	(*200)							
Grill,	Berks, Cumru Twp.,	Grill W. Co.,	180b	50						1	
Hamburg,	Berks,	Windsor W. Co.,	3,000	3,000			1				
Hatboro,	Montgomery,	Hatboro W. Co.,	2,000	1,200			1				
Honey Brook,	Chester,	Municipal,	580	570				1			
House of Refuge of Eastern Penn'a.	Delaware, Middletown and Edgemont Twps.	Private,	(500)	(500)							
Hyde Park and neighboring villages.	Berks, Muhlenberg Twp.,	Reading Suburban W. Co.,	2,500	1,500						9	
Jenkintown,											
Abington Twp.,	Montgomery,	Jenkintown, W. Co.,	5,000	5,000			1				
Cheltenham Twp.,											
Kennett Square,	Chester,	Municipal,	2,200b	2,000b				1			
Lyons,	Berks, Maxatawny Twp.,	Lyons W. Co.,	400	400						1	

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 3—Continued

Place	County	Ownership or Control	Population 1915	Population Supplied	City Company	City Municipal	Borough Company	Borough Municipal	Borough Private	Village Company	Village Private
Lytle,	Schuylkill, Cass Twp.,	Crystal W. Co.,	5,000b	5,000						1	
Branchdale,	Schuylkill, Reilly Twp.,										
Forestville,	Schuylkill, Cass Twp.,										
Llwellyn,	Schuylkill, Branch Twp.,										
Kutztown,	Berks,	Kutztown W. Co.,	2,500b	1,100			1				
Malvern,	Chester,	Municipal,	1,200	1,200				1			
Media,	Delaware,	Municipal,	3,756	5,312				1			
Nether Providence Twp.,	Delaware,	The Wallingford W. Co.,	1,556							1	
Middleport,	Schuylkill,	Middleport W. Co.,	1,100	400			1				
Millmont,											
Boyers Heights,			1,600	1,500						1	
Brookside,	Berks, Cumru Twp.,	Angelica Water & Ice Co.,									
Oakbrook,											
Reading Heights,											
Minersville,											
Cass Twp. (part),	Schuylkill,	Minersville W. Co.,	10,000	10,000			1				
Norwegian Twp. (part),											
Mohnton,	Berks,		1,600								
Edison,	Berks, Cumru Twp.,	The Mohnsville W. Co.,	2,000b	2,000b			1				
Shillington,											
Morea,	Schuylkill, Mahanoy Twp.,	The Morea W. Co.,	980	980b						1	
Mt. Penn,	Berks,										
Black Bear,	Berks, Exeter Twp.,	Mt. Penn Suburban W. Co.,	1,900	1,600			1				
Stony Creek,	Berks, Alsace Twp.,										
Muhlenberg Station,	Berks, Muhlenberg Twp.,	Mammoth Springs W. Co.,	52	52						1	
Myerstown,	Lebanon,	Myerstown W. Co.,	3,000	3,000			1				
Newcastle,	Schuylkill, New Castle Twp.,	The Butcher Spring W. Co.,	500	300						1	
Newmanstown,	Lebanon, Mill Creek Twp.,	The Newmanstown W. Co.,	1,000	1,000						1	
New Philadelphia,		Silver Creek W. Co.,	3,000b	3,200			1				
Cumbola,	Schuylkill, Blythe Twp.,		1,500b								
Norristown,				32,250			1				
Bridgeport,	Montgomery,	Norristown Insurance & W. Co.,	38,200	4,000							
West Norriton Twp.,				138							
North Wales,	Montgomery,	The North Wales W. Co.,	2,000	2,500			1				

Orwigsburg,	Schuylkill,	Municipal,	1,950	1,900				1			
Parkesburg,	Chester,	Parkesburg W. Co.,	2,500	1,500			1				
Pensburg,	Montgomery,	Pensburg W. Co.,	1,350	2,000			1				
Perkasie,	Bucks,	Perkasie W. S. Co.,	3,000	2,700			1				
Philadelphia,	Philadelphia,	Municipal,	1,683,664x	1,611,000		1					
Philadelphia—35th & 41st Wards. Holmesburg, Tacony, Wissinoming,	Philadelphia,	Philadelphia & Bristol W. Co.,	(27,000)	26,500	1						
		Overbrook Steam Heat Co.,		2,000	1§						
Philadelphia, Overbrook,	Philadelphia,	Municipal,	12,000	11,700				1			
Phoenixville,	Chester,										
Pottstown,	Montgomery,	Pottstown Gas & W. Co.,	17,600	17,000			1				
Stowe,	Montgomery, W. Pottsgrove Twp.,										
South Pottstown,	Montgomery, N. Coventry Twp.,										
Pottsville, Mt. Carbon, Palo Alto, Port Carbon, St. Clair,	Schuylkill,	The Pottsville W. Co.,	34,400	34,400	1						
		Municipal,	105,094x	101,600		1					
Reading,	Berks,	Red Hill W. Co.,	700	350			1				
Red Hill,	Montgomery,	Richland W. Co. of Richland,	700	700			1				
Richland,	Lebanon,	Home W. Co.,	7,000	6,000			1				
Royersford,	Montgomery,										
Spring City,	Chester,	St. Lawrence W. Co.,	300	300						1	
St. Lawrence,	Berks, Exeter Twp.,	Schuylkill Haven Gas & Water Co.,	4,800	6,500			1				
Schuylkill Haven,	Schuylkill,		2,000								
Cressona,	Lebanon, Mill Creek Twp.,	Mill Creek W. Co.,	260	225						1	
Sheridan,	Schuylkill, Branch Twp.,	Sheafers Creek W. Co.,	83	83						1	
Silverton,	Berks,										
Sinking Spring,	Berks, Spring Twp.,	Sinking Spring W. Co.,	1,500	1,000			1				
Springmont,	Berks, Spring Twp.,										
West Lawn,	Montgomery,	Municipal,	2,000	1,400				1			
Souderton,	Hamburg, Berks,	State Institution System,	(500)	(500)							
State Hospital, Tuberculosis.	Norristown, Montgomery,	State Institution System,	(3,000)	(3,000)							
State Insane Hospital,	Wernersville, Berks,	State Institution System,	(1,000)	(1,000)							
State Insane Hospital,	Spring City, Chester,	State Institution System,	(700b)	(700)							
State Institution for Feeble Minded (E. Pa.)	Chester, Montgomery & Delaware,	Springfield Cons. W. Co.,	131,250	110,000b			1†			(†)	
Suburbs of Philadelphia: 19 boroughs and 122 villages in 24 Twps.											
Tamaqua,	Schuylkill,	Municipal,	12,000	11,500				1			
Telford,	Bucks,	Telford W. Co.,	1,200	400b			1				
West Telford,	Bucks,										
Reliance,	Montgomery, Franconia Twp.,										
Maple,	Montgomery, Hilltown Twp.,										
Walters Sanatorium,	Berks, Lower Heidelberg Twp.,	Private,	(200)	(200)							
Wernersville,	Berks,	The Wernersville W. Co.,	800	800			1				

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 3—*Continued*

Place	County	Ownership or Control	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
West Conshohocken,	Montgomery,	The West Conshohocken W. Co.,	2,300	1,650			1				
West Chester,	Chester,	Municipal,	12,949x	11,900				1			
West Grove,	Chester,	West Grove W. Co.,	1,350	1,340			1				
West Reading,	Berks,	West Reading W. Co.,	2,600	2,500			1				
Wyomissing,	Berks,										
Womelsdorf,	Berks,	Womelsdorf Cons. W. Co.,	1,350	2,500			1				
Robesonia,	Berks,		1,000b								
Heidelberg Twp. (part),	Berks,										

xU. S. census
*Summer population
**Municipally supplied
§Private supply
†For list of Places see page 115
aEstimated by water companies
bEstimated by Water Supply Commission
dDomestic
tTotal

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 3—Continued

Place.	County.	Ownership or Control.	Supply: Source: Surf.	Supply: Source: Ground	Supply: Source: Comb.	Supply: Method: Grav.	Supply: Method: Pumped	Supply: Method: Comb.	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Ambler, Upper Dublin Twp.,	Montgomery,	Ambler Spring W. Co.,	--	--	1	----	----	1	150,000b	----------	150,000b	------
Auburn,	Schuylkill,	The Auburn W. Co.,	1	--	----	1	----	----	22,500b	60,000b	82,500b	------
Avondale,	Chester,	Avondale W. Co.,	1	--	----	----	1	----	32,000	8,000	40,000	80t
Birdsboro,	Berks,	Birdsboro W. Co.,	--	--	1	----	----	1	200,000a	300,000a	500,000a	------
Bowers Station,	Berks, Maxatawny Twp.,	Flint Hill W. Co.,	--	1	----	1	----	----	1,400a	2,100a	3,500a	------
Boyertown,	Berks,	Municipal,	--	1	----	1	----	----	----------	----------	144,000a	------
Brockton,	Schuylkill, Schuylkill Twp.,	Moss Glen W. Co.,	1	--	1	----	----	1	15,000a	----------	15,000a	------
Chester, Chester Twp., Lower Chichester Twp., Marcus Hook, Upland,	Delaware,	The New Chester W. Co.,	1	--	----	----	1	----	1,800,000	1,700,000	3,500,000	64t
Coatesville,	Chester,	Municipal,	1	--	----	----	----	1	----------	----------	1,500,000b	------
Downingtown,	Chester,	Municipal,	1	--	----	1	----	----	102,000b	34,000b	136,000b	------
East Greenville,	Montgomery,	Municipal,	1	--	----	----	1	----	49,000a	26,000	75,000a	------
Esterly,	Berks, Exeter Twp.,	Private (Amos Reiff),	--	1	----	1	----	----	3,600b	----------	3,600b	------
Fleetwood,	Berks,	Municipal,	--	1	----	1	----	----	----------	----------	30,000b	------
Glenside,	Berks, Spring Twp.,	Glenside W. Co.,	--	1	----	----	1	----	59,600a	----------	59,600a	------
Grand View Sanatorium,	Berks, Lower Heidelberg Twp.,	Private,	--	--	----	----	----	----	6,000b	----------	6,000b	------
Grill,	Berks, Cumru Twp.,	Grill W. Co.,	--	1	----	1	----	----	1,500b	----------	1,500b	------
Hamburg,	Berks,	Windsor W. Co.,	--	--	1	----	----	1	210,000	140,000	350,000	117t
Hatboro,	Montgomery,	Hatboro W. Co.,	--	1	----	----	1	----	53,400	1,600	55,000	46t
Honey Brook,	Chester,	Municipal,	--	1	----	1	----	----	17,100b	----------	17,100b	------
House of Refuge of Eastern Penn'a.	Delaware, Middletown and Edgemont Twps.	Private,	--	--	----	----	----	----	40,000	----------	40,000	80d
Hyde Park and neighboring villages.	Berks, Muhlenberg Twp.,	Reading Suburban W. Co.,	--	1	----	----	----	1	47,700	5,300	53,000	35t
Jenkintown, Abington Twp., Cheltenham Twp.,	Montgomery,	Jenkintown, W. Co.,	--	--	1	----	----	1	350,000	----------	350,000	70d

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 3—*Continued*

Place.	County.	Ownership or Control.	Supply: Source: Surf.	Supply: Source: Ground	Supply: Source: Comb.	Supply: Method: Grav.	Supply: Method: Pumped	Supply: Method: Comb.	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Kennett Square,	Chester,	Municipal,	1	--	--	--	--	1	--	--	180,000b	--
Lyons,	Berks, Maxatawny Twp.,	Lyons W. Co.,	--	1	--	1	--	--	12,000b	--	12,000b	--
Lytle,	Schuylkill, Cass Twp.,											
Branchdale,	Schuylkill, Reilly Twp.,	Crystal W. Co.,	1	--	--	1	--	--	648,000a	1,513,000a	2,162,000a	--
Forestville,	Schuylkill, Cass Twp.,											
Llwellyn,	Schuylkill, Branch Twp.,											
Kutztown,	Berks,	Kutztown W. Co.,	--	--	1	--	1	--	83,000b	67,000b	150,000b	--
Malvern,	Chester,	Municipal,	--	1	--	--	1	--	36,000b	--	36,000b	--
Media,	Delaware,	Municipal,	1	--	--	--	--	1	515,000	--	515,000	97d
Nether Providence Twp.,	Delaware,	The Wallingford W. Co.,	1	--	--	--	1	--				
Middleport,	Schuylkill,	Middleport W. Co.,	1	--	1	--	--	1	30,000a	--	30,000a	--
Millmont,												
Boyers Heights,												
Brookside,	Berks, Cumru Twp.,	Angelica Water & Ice Co.,	1	--	--	--	1	--	45,000b	--	45,000b	--
Oakbrook,												
Reading Heights,												
Minersville,												
Cass Twp. (part),	Schuylkill,	Minersville W. Co.,	1	--	--	1	--	--	500,000	500,000	1,000,000	100t
Norwegian Twp. (part),												
Mohnton,	Berks,											
Edison,	Berks, Cumru Twp.,	The Mohnsville W. Co.,	--	--	1	--	--	1	50,000a	--	50,000a	--
Shillington,												
Morea,	Schuylkill, Mahanoy Twp.,	The Morea W. Co.,	--	1	--	--	1	--	128,000	210,000	338,000	345t
Mt. Penn,	Berks,											
Black Bear,	Berks, Exeter Twp.,	Mt. Penn Suburban W. Co.,	--	--	1	1	--	--	54,000a	6,000a	60,000a	--
Stony Creek,	Berks, Alsace Twp.,											
Muhlenberg Station,	Berks, Muhlenberg Twp.,	Mammoth Springs W. Co.,	--	1	--	--	1	--	5,000	--	5,000	96d
Myerstown,	Lebanon,	Myerstown W. Co.,	--	1	--	--	--	1	60,000a	20,000a	80,000a	--
Newcastle,	Schuylkill, New Castle Twp.,	The Butcher Spring W. Co.,	1	--	--	1	--	--	9,000b	2,300b	11,300b	--
Newmanstown,	Lebanon, Mill Creek Twp.,	The Newmanstown W. Co.,	--	--	1	1	--	--	11,000a	1,700a	12,700a	--

New Philadelphia,	Schuylkill, Blythe Twp.,	Silver Creek W. Co.,	1				1	130,000	1,166,000	1,296,000	40d
Cumbola,											
Norristown,	Montgomery,	Norristown Insurance & W. Co.,	1			1		1,500,000	1,000,000	2,500,000	78t
Bridgeport,								315,000	135,000	450,000	112t
West Norriton Twp.,								2,300	3,000	5,300	38t
North Wales,	Montgomery,	The North Wales W. Co.,		1		1		72,000	18,000	90,000	36t
Orwigsburg,	Schuylkill,	Municipal,	1		1			33,800a	11,200a	45,000a	
Parkesburg,	Chester,	Parkesburg W. Co.,		1			1	119,000	6,000	125,000	83t
Pensburg,	Montgomery,	Pensburg W. Co.,	1		1			72,800a	2,200a	75,000a	
Perkasie,	Bucks,	Perkasie W. S. Co.,		1			1	120,000	30,000	150,000	56t
Philadelphia,	Philadelphia,	Municipal,	1			1				287,671,000	178t
Philadelphia—35th & 41st Wards.											
Holmesburg,	Philadelphia,	Philadelphia & Bristol W. Co.,	1			1		1,456,000	364,000	1,820,000	71t
Tacony,											
Wissinoming,											
Philadelphia, Overbrook,	Philadelphia,	Overbrook Steam Heat Co.,		1		1		128,000		128,000	64d
Phoenixville,	Chester,	Municipal,	1			1		960,000	240,000	1,200,000	102t
Pottstown,	Montgomery,										
Stowe,	Montgomery, W. Pottsgrove Twp.,	Pottstown Gas & W. Co.,	1			1		600,000	1,000,000	1,600,000	94t
South Pottstown,	Montgomery, N. Coventry Twp.,										
Pottsville,											
Mt. Carbon,											
Palo Alto,	Schuylkill,	The Pottsville W. Co.,	1				1			5,000,000	145t
Port Carbon,											
St. Clair,											
Reading,	Berks,	Municipal,			1		1			15,559,500	153t
Red Hill,	Montgomery,	Red Hill W. Co.,		1		1		15,000a		15,000a	
Richland,	Lebanon,	Richland W. Co. of Richland,			1	1		21,000b		21,000b	
Royersford,	Montgomery,	Home W. Co.,	1			1		361,000	11,000	372,000	62t
Spring City,	Chester,										
St. Lawrence,	Berks, Exeter Twp.,	St. Lawrence W. Co.,		1		1		16,200a	1,800a	18,000a	
Schuylkill Haven,	Schuylkill,	Schuylkill Haven Gas & Water Co.,			1		1	225,000	75,000	300,000	46t
Cressona,											
Sheridan,	Lebanon, Mill Creek Twp.,	Mill Creek W. Co.,	1			1		5,500		5,500	24a
Silverton,	Schuylkill, Branch Twp.,	Sheafers Creek W. Co.,			1	1		1,700b		1,700b	
Sinking Spring,	Berks,										
Springmont,	Berks, Spring Twp.,	Sinking Spring W. Co.,		1			1	180,000a	20,000a	200,000a	
West Lawn,	Berks, Spring Twp.,										
Souderton,	Montgomery,	Municipal,		1		1		42,000b		42,000b	
State Hospital, Tuberculosis.	Hamburg, Berks,	State Institution System,									
State Insane Hospital,	Norristown, Montgomery,	State Institution System,						600,000		600,000	200d
State Insane Hospital,	Wernersville, Berks,	State Institution System,						500,000		500,000	500d
State Institution for Feeble Minded (E. Pa.)	Spring City, Chester,	State Institution System,						173,000a		173,000a	
Suburbs of Philadelphia: 19 boroughs and 122 villages in 24 Twps.	Chester, Montgomery & Delaware,	Springfield Cons. W. Co.,	1			1		5,380,000	2,690,000	8,070,000	80t

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 3—*Continued*

Place.	County.	Ownership or Control.	Supply: Source: Surf.	Supply: Source: Ground	Supply: Source: Comb.	Supply: Method: Grav.	Supply: Method: Pumped	Supply: Method: Comb.	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Tamaqua,	Schuylkill,	Municipal,	1					1	1,000,000	400,000	1,400,000	122t
Telford,	Bucks,	Telford W. Co.,		1			1		17,500		17,500	44d
West Telford,	Bucks,											
Reliance,	Montgomery, Franconia Twp.,											
Maple,	Montgomery, Hilltown Twp.,											
Walters Sanatorium,	Berks, Lower Heidelberg Twp.,	Private,							3,000a	2,000a	5,000a	
Wernersville,	Berks,	The Wernersville W. Co.,		1		1			105,000a	45,000a	150,000a	
West Conshohocken,	Montgomery,	The West Conshohocken W. Co.,	1				1		51,200		51,200	31d
West Chester,	Chester,	Municipal,	1				1		834,500	83,500	918,000	77t
West Grove,	Chester,	West Grove W. Co.,		1			1		30,000		30,000	22d
West Reading,	Berks,	West Reading W. Co.,	1				1		150,000a	2,300a	152,300a	
Wyomissing,												
Womelsdorf,	Berks,	Womelsdorf Con. W. Co.,		1		1			75,000b		75,000b	
Robesonia,												
Heidelberg Twp. (part),												

¶Womelsdorf Con. Water Co.
xU. S. census
*Summer population
**Municipally supplied
§Private supply
†For list of Places see page 115
aEstimated by water companies
bEstimated by Water Supply Commission
dDomestic
tTotal
‡Silver Creek W. Co.

RAILROAD WATER SUPPLIES, SECTION NO. 3.

PENNSYLVANIA

Station	Source of supply	Method of Supply	Avg. daily consumption	
			R. R.	Public
New York Div'n				
Chestnut Hill,	Phila. Municipal,			40,000
Engleside,	Phila. Municipal,			15,000
Midvale,	Phila. Municipal,			10,000
N. Penn Jct.,	Phila. Municipal,			30,000
North Phila., 17th St.,	Phila. Municipal,			13,000
Tacony,	Phila. Municipal,			15,000
Phila. Term. Div'n				
Belmont,	Phila. & Reading Ry.,			
Dock Street,	Phila. Municipal,			10,000
E. Morris St. Frt. Yd.,	Phila. Municipal,			5,000
Engine House No. 2,	Phila. Municipal,			1,468,500
Eng. House W. of 46th St.,	Phila. Municipal,			241,000
Eng. House E. of 52nd St.,	Phila. Municipal,			159,000
Frankford Jct.,	Phila. Municipal,			130,000
Girard Point,	Girard Point Storage Co.,			22,000
Greenwich D 14,	Del. Riv. & Wells,	Pumped,	120,000	
Greenwich Pier No. 6,	Del. River,	Pumped,	110,000	
Grays Ferry (Ash Pits),	Phila. Municipal,			151,000
Hamburg,	Atlantic Ref. Co.,			22,000
Kensington,	Phila. Municipal,			25,000
Mantua Stor. Yard,	Phila. Municipal,			56,000
Mantua Tfr. E. end,	Phila. Municipal,			10,000
Old Navy Water Plug,	Phila. Municipal,			25,000
Power House E. of 46th St.,	Phila. Municipal,			398,000
Schuylkill River Branch,	Phila. Municipal,			25,000
Shackamaxon St.,	Phila. Municipal,			23,000
S. of Grays Ferry Bridge,	Phila. Municipal,			76,000
16th St. & Washington Ave.,	Phila. Municipal,			128,000
South St. Yard,	Phila. Municipal,			12,000
Shop Yd. at Boiler Shop,	Phila. Municipal,			8,000
Spg. Gdn. St. Bridge,	Phila. Municipal,			25,000
Tioga St. Frt. Yard,	Phila. Municipal,			5,000
30th St. Coal Whf.,	Phila. Municipal,			212,000
30th St. pump house,	Phila. Municipal,			
	Schuylkill River,	Pumped,		
20th & Commerce Sts. Main Line	Phila. Municipal,			6,000
20th to 23rd Sts. Pass. & Eng. Yards	Phila. Municipal,			100,000
West Phila.,	Phila. Municipal,			288,000
Bryn Mawr,	N. Springfield W. Co.,			17,600
Chester Valley Int.,	Stream,	Gravity,	very little	
Downingtown Yd.,	Octoraro W. Co.,		30,000	
Downingtown (4 track Pans),	Octoraro W. Co.,		300,000	
Earnest,	Schulykill River,	Pumped,	300,000	
Glen Loch,	Stream,		65,000	
	N. Springfield W. Co.,		35,000	
Heaton,	Pennypack Creek,	Pumped,	300,000	
Howellville,	Stream,	Pumped,	80,000	
Lewis Mills,	Stream,		20,000	
E. Downingtown,	Stream,			
Paoli,	N. Springfield W. Co.,			60,000
Parkesburg,	Octoraro W. Co.,		70,000	
Landenberg,	Stream,		15,000	
Radnor (4 track Pans),	N. Springfield W. Co.,			350,000
Ship Road,	Stream,	Gravity,	60,000	
Stottsville,	Stream,		20,000	
Thorndale,	Octoraro W. Co.,		500,000	
West Chester,	Municipal Works,			40,000
White Marsh,	Wissahickon Creek,	Pumped,	300,000	
Schuylkill Div'n				
Auburn,	Stream,	Gravity,	9,000	
Clingan,	Municipal Works,			12,000
Devault,	Stream,	Pumped,	18,000	
Earnest "Y",	Schuylkill River,	Pumped,	21,000	
East Reading,	Wyomissing Creek,	Pumped,	112,000	
Franklin Avenue,	Schuylkill River,	Pumped,	108,000	
Hamburg,	Municipal Works,			18,000
Manayunk,	Phila. Municipal,			24,000

RAILROAD WATER SUPPLIES, SECTION NO. 3—Continued

PENNSYLVANIA

Station	Source of supply	Method of Supply	Avg. daily consumption	
			R. R.	Public
Schuylkill Div'n—Continued				
Mount Carbon,	Spring,	Pumped,	120,000	
Mount Carbon,	Pottsville W. Co.,			22,000
Phoenixville,	Municipal Works,			147,000
Pottstown,	Schuylkill River,	Pumped,	42,000	
Pottsville,	Pottsville W. Co.,			8,000
Primrose,	Municipal Works,			6,000
Reading,	Municipal Works,			81,000
Shawmont,	Phila. Municipal,			15,000
Spring City,	Schuylkill River,	Pumped,	20,000	

PHILADELPHIA, BALTIMORE & WASHINGTON

Maryland Div'n				
Glenolden,	Muckinipates Creek,	Pumped,	396,000	
Lamokin,	Chester Municipal,			140,000
Central Div'n				
Avondale,	Avondale W. Co.,			700
Concordville,	Springs,	Gravity,	30,000	
Fernwood,	Springfield W. Co.,			14,000
Foxcroft,	Springfield W. Co.,			5,000
Kennett,	Municipal Works,			75,000
Media,	Municipal Works,			55,000
Milbourne Mills,	Water Company,			12,000
Lamokin,	Chester Municipal,			20,000
Wawa,	Chester Cr. and Well,	Pumped,	100,000	
West Chester,	Municipal Works,			75,000

PHILADELPHIA & READING

Phila. Div'n				
Belmont,	Phila. Municipal,			21,000
Broad & Huntingdon Sts.,	Phila. Municipal,			100,000
Chester,	Municipal Works,			18,600
8th & Master Sts.,	Phila. Municipal,			4,000
11th & Race Sts.,	Terminal Power Hse.,	Pumped,	188,000	
15th St. Subway,	Phila. Municipal,			21,000
4th & Erie Ave.,	Phila. Municipal,			30,000
Front & Willow Sts.,	Phila. Municipal,			28,000
9th & Green Sts.,	Phila. Municipal,			679,000
Port Richmond, Allegheny Ave.	Phila. Municipal,			120,000
Ann St. Piers & Shps.,	Phila. Municipal,			123,000
Frankford Ave. Ash Pits,	Phila. Municipal,			21,000
Richmond Street,	Phila. Municipal,			612,000
Trenton Avenue,	Phila. Municipal,			398,000
Toronto St. Coal Plant,	Phila. Municipal,			6,000
Williams St. Car Shops,	Phila. Municipal,			5,000
South Chester,	Chester Municipal,			23,000
10th & Norris Sts.,	Phila. Municipal,			12,000
3rd & Berks Sts.,	Phila. Municipal,			270,000
32nd & Thompson Sts.,	Phila. Municipal,			36,000
20th & Hamilton Sts.,	Phila. Municipal,			543,000
Wayne Junction,	Phila. Municipal,			314,000
West Falls,	Phila. Municipal,			190,000
West Falls,	Schuylkill River,	Pumped,		10,000
Reading Div'n				
Allisons,	Pottsville W. Co.,			20,000
Aramingo,	Schuylkill River,	Pumped,	275,000	
Auburn,	Auburn W. Co.,			80,000
Bechtelsville,	Auburn W. Co.,			25,000
Blandon,	Auburn W. Co.,			200,000
Brookside,	P. & R. C. & I. Co.,			35,000
Bridgeport,	Schuylkill River,	Pumped,	300,000	
Byers,	Creek,	Pumped,	15,000	

RAILROAD WATER SUPPLIES, SECTION NO. 3—Continued

PHILADELPHIA & READING

Station	Source of supply	Method of Supply	Avg. daily consumption R. R.	Avg. daily consumption Public
Reading Div'n—Continued.				
Chapel Ridge,	Creek,	Gravity,	50,000	
Cressona,	Brook,	Pumped,	100,000	
Downingtown,	Stream,	Pumped,	20,000	
Fern Siding,	Spring,	Gravity,	40,000	
Frackville,	Anthracite W. Co.,			50,000
Green Lane,	Perkiomen Creek,	Pumped,	50,000	
Hosensack,	Stream,	Gravity,	35,000	
Hamburg,	Creek,	Gravity,	25,000	
Hammon,	Creek,	Gravity,	25,000	
Lyons,	Creek,	Gravity,	175,000	
Leesport Furnace,	Water Company,			30,000
Middleport,	Brook,	Gravity,	75,000	
Mine Hill,	Schuylkill River,	Gravity,	40,000	
Mohrsville,	Schuylkill River,	Pumped,	175,000	
Monocacy,	Schuylkill River,	Pumped,	175,000	
New Ringgold,	Brook,	Gravity,	150,000	
New Centerville,	Spring,	Gravity,	20,000	
Perkiomen Jct.,	Schuylkill River,	Pumped,	75,000	
Phoenixville,	French Creek,	Pumped,	175,000	
Pottstown,	Mill race,	Pumped,	250,000	
Port Clinton,	Rattling Run,	Gravity,	175,000	
Pottsville,	Pottsville W. Co.,			40,000
Pottsville Nichols St.,	Pottsville W. Co.,			30,000
Reading Upper Station,	Stream,	Pumped,	275,000	
Spring Street,	Municipal Works,			20,000
Main Station,	Municipal Works,			25,000
Lebanon Val. Jct.,	Tulpehocken Creek,	Pumped,	250,000	
Schuylkill Haven,	P. & R. C. & I. Co.,			10,000
Silverton,	Stream,	Gravity,	25,000	
St. Clair,	P. & R. C. & I. Co.,			400,000
Topton,	Stream,	Gravity,	25,000	
Vera Cruz,	Spring,	Gravity,	15,000	
Wood Lane,	Stream,	Gravity,	150,000	
New York Div'n				
Ambler,	Keasby & Mattison Co.,			9,000
Chestnut Hill,	Phila. Municipal,			22,000
Conshohocken,	N. Springfield W. Co.,			70,000
Germantown,	Phila. Municipal,			22,000
Flourtown,	Stream,	Pumped,	42,000	
Frankford,	Municipal Works,			6,000
Fullmore,	Stream,	Pumped,	30,000	
Glenside,	Spring,	Gravity,		
	N. Springfield Co.,			25,000
Gwynedd Valley,	Stream,	Gravity,	33,000	
Harpers,	Stream,	Gravity,	4,000	
Jenkintown,	Stream,	Pumped,	175,000	
Lansdale,	Drilled Wells,	Pumped,	105,000	
Manayunk,	Municipal Works,			6,000
Newtown,	Municipal Works,			42,000
Lawndale,	N. Springfield W. Co.,			10,000
Norristown,	Municipal Works,			20,000
Perkasie,	Stream,	Gravity,	30,000	
Shamokin Div'n				
E. Mahanoy Jct.,	Hosensack Brk.,	Pumped,	175,000	
Hammond,	Girard W. Co.,			5,000
Lofty,	Stream,	Gravity,	75,000	
Mahanoy City,	Mahanoy City W. Co.,			700
Mahanoy Tunnel,	Spring,	Gravity,	9,000	
Tamaqua,	Tamaqua Bor. W. Co.,			425,000
Wilmington & Columbia Div'n				
Birdsboro,	Municipal Works,			75,000
Coatesville,	Brandywine Creek,	Pumped,	20,000	
Coatesville Coal Dock,	Brandywine Creek,	Pumped,	140,000	
Conestoga,	Spring,	Gravity,	(emerg'y)	
Brandamore,	Brandywine Creek,	Pumped,	65,000	
Cossart,	Mr. Pyle,			55,000
Cossart,	Spring,	Gravity,	15,000	
Evansville,	Maiden Creek,	Pumped,	8,000	
Hampton,	Hampton Creek,	Gravity,	20,000	
Kempton,	Stream,	Gravity,	5,000	

RAILROAD WATER SUPPLIES, SECTION NO. 3—Continued

PHILADELPHIA & READING

Station.	Source of Supply	Method of Supply	Avg. daily consumption	
			R. R.	Public
Wilmington and Columbia Div'n—Continued				
Mortonville,	Spring,	Gravity,	15,000	
St. Peters,	Mine Run,	Gravity,	15,000	
Wawaset,	Spring,	Gravity,	30,000	
Harrisburg Div.				
Myerstown,	Myerstown W. Co.,			
Prescott,	Myerstown W. Co.,			
Richland,	Richland W. Co.,			
Robesonia,	Robesonia Iron Co.,			185,000
Sheridan,	Mill Creek W. Co.,			
Sinking Spg.,	Sinking Spring W. Co.,			
South Mountain, Wernersville.	Wernersville W. Co.,			
Womelsdorf,	Spring,	Gravity,		

LEHIGH VALLEY

Glenworth,	Stream,	Gravity,	30,000	
Kepners,	Stream,	Gravity,	10,000	
Mahanoy & Hazleton Div.				
Delano Junction,	Wyoming Val. W. S. Co.,			22,000
Delano Shops,	Wyoming Val. W. S. Co.,			175,000
Morea,	Stream,	Gravity,	4,000	
Park Place,	Wyoming Val. W. S. Co.,			5,000
Stewarts,	Stream,	Gravity,	20,000	
Trenton,	Wyoming Val. W. S. Co.,			66,000
Yatesville,	Stream,	Gravity,	33,000	

BALTIMORE & OHIO

Chester,	Chester W. Co.,			6,000
Holmes,	Springfield W. Co.,			3,600
Philadelphia				
East Side,	Phila. Municipal,			12,000
East Side Shops,	Schuylkill River,	Pumped,	300,000	
Locust St.,	Phila. Municipal,			60,000
Pier No. 40,	Phila. Municipal,			2,000
Snyder Ave.,	Phila. Municipal,			22,000

PENCOYD & PHILADELPHIA

Pencoyd,	Creeks,	Gravity,	18,800	
Pencoyd,	Schuylkill River,	Pumped,	6,800	
Totals,			8,082,600	10,851,700

INDUSTRIAL WATER SUPPLIES, SECTION NO. 3—(MISCELLANEOUS COMPANIES).

Does not Include all the Smaller Companies.

Place	Company	Source	Method	Industrial consumption	Daily amount of product	Returned to stream	Increase in Temperature
				(Gals. per day)		(%)	(°F)
Philadelphia,	Allan Wood Iron & Steel Co.:						
	Blast Furnace,	Schuylkill River and small stream	Pumped,	15,000,000	700 tons,	95	10
Philadelphia,	Steel Works,	Schuylkill River,	Pumped,	c2,934,000		all	
		Springfield Cons. W. Co.		s(170,000)	1063 tons,		materially
Philadelphia,	Schuylkill Iron Works,	Arrowmink Creek,	Gravity,	742,000	182 tons,	60	
		Schuylkill Canal (Aux.)	Pumped,				
		Springfield C. W. Co.		(435)			
Philadelphia,	Dill & Collins Co. Paper Mfg.,	Delaware River,	Pumped,	6,000,000	50 tons paper & 26 tons pulp	all	15
Philadelphia,	Drueding Bros. Co., Leather,	Phila. Municipal,		(60,000)	473 doz. skins,	all	5
Philadelphia,	Henry Disston & Sons,	Delaware River,	Pumped,	3,000,000		70	5
		Disston W. Co.,		(800)			
Philadelphia,	England, Walton & Co., Leather,	Phila. Municipal,		(6,000)	1,000 sides finished leather	60	0
Philadelphia,	Stanley G. Flagg & Co.,	Schuylkill River,		170,000		60	15
	Foundry & Mfg.,	Phila. Municipal,		(48,000)			
Philadelphia,	Robt. E. Foederer, Inc., Vici Kid Works	Two drilled wells,	Pumped,	25,000	1,100 doz. kids,	all	22
		Phila. Municipal,		(300,000)			
Philadelphia,	Hair Department,	Phila. Municipal,		(26,000)	6,700 lbs.,	all	0
Philadelphia,	Bridesburg Glue Factory,	Delaware River,	Pumped,	500,000	9 000 lbs.,	all	0
		Phila. Municipal,		(152,300)			
Philadelphia,	Globe Ticket Co.,	Phila. Municipal,		(14,000)			
Philadelphia,	David Lupton's Sons Co.,	Phila. Municipal,		(22,000)			
Philadelphia,	Martin & W. H. Nixon Paper Co.,	Schuylkill Canal,	Pumped,	6,500,000	55 tons,	10 to 25	15 to 25
Philadelphia,	Mitchell & Peirson (leather),	Schuylkill River,	Pumped,	250,000		all	0
		Phila. Municipal,		(25,000)			
Philadelphia,	Penn Rivet Mfg. Co., Inc.,	Phila. Municipal,		(12,300)			
Philadelphia,	C. Schmidt & Sons (Brewery),	Phila. Municipal,		(176,500)	729 bbls.,		10
Philadelphia,	Surpass Leather Co.,	Phila. Municipal,		(400,000	1,850 doz. skins,	90	0
Philadelphia,	Standard Roller Bearing Co.,	Phila. Municipal,		(55,000)			
Philadelphia,	Phila. Paper Mfg. Co.,	Schuylkill River & Canal	Pumped,	3,000,000			

INDUSTRIAL WATER SUPPLIES, SECTION NO. 3—(MISCELLANEOUS COMPANIES)—Continued

Place	Company	Source	Method	Industrial consumption	Daily amount of product	Returned to stream	Increase in Temperature
				(Gals. per day)		(%)	(°F)
Philadelphia,	National Waste Co.,	Schuylkill Canal,	Pumped,	500			
Philadelphia,	The Arnholt & Schaefer Brewing Co.	Phila. Municipal,		(12,400)	6,200 gals.,	55	0
Philadelphia,	Baldwin Locomotive Works: Eddystone Plant,	Crum Creek,	Pumped,	4,773,600	6½ locos.,	60	20
		Springfield Cons. W. Co.		(18,666)			
Philadelphia,	Philadelphia Plant,	Phila. Municipal,					
Philadelphia,	Belber Trunk & Baggage Co.,	Phila. Municipal,		(25,000)		0	0
Philadelphia,	Louis Bergdoll Brew. Co.,	Drilled well,	Pumped,	c50,000	8,600 gals.,	25	0
		Phila. Municipal,		(112,500)			
Philadelphia,	J. G. Brill & Co.,	Phila. Municipal,		(250,000)			
Philadelphia,	Green Lane Trap Rock Co.,	Macoby Creek,	Gravity,	10,000	100 tons,	0	0
Philadelphia,	Midvale Steel Co.,	Phila. Municipal,		(2,100,000)	256 tons,	25 to 50	Decided
Philadelphia,	Collins & Aikman (plush),	Schuylkill Canal,	Pumped,	80,000			
Philadelphia,	S. B. & B. W. Fleisher (yarn),	Schuylkill Canal,	Pumped,	27,000			
Philadelphia,	S. S. Keeley & Sons,	Schuylkill Canal,	Pumped,	6,000			
Outside Phila. City							
Ambler, Montgomery Co.,	Keasbey & Mattison Mfg. Co.,	Wissahickon Creek,	Pumped,				
Birdsboro, Berks County,	E. & G. Brooke Iron Co.,	Schuylkill River,	Pumped,	1,500,000			
		Hay Creek,	Pumped,	3,500,000			
	Birdsboro Stone Co.,	Small Tributary of Six Penny Creek.	Gravity,	420,000	130 tons,	80	120
Bridgeport, Montg'my Co.,	Jones Leas & Sons Co. (yarn),	Schuylkill Canal,	Pumped,	1,500,000		all	
	Diamond State Fibre Co.,	Schuylkill River,	Pumped,	3,000,000		90	
Chester, Delaware County,	Harbison-Walker Refractories Co.,	New Chester W. Co.,		(30,000)	125 tons,	10	to 110°
Evansville, Berks County,	Allentown Portland Cement Co.,	Maiden Creek,	Pumped,	3,500,000	2,500 bbls.,	90	
Leesport, Berks County,	Leesport Furnace Co.,	Schuylkill Canal,	Pumped,	95,000			
Conshohocken, Montgomery County	J. Wood & Bros. Co. (iron & steel)	Schuylkill Canal,	Pumped,	300,000			
Malvern, Chester County,	Hires Condensed Milk Co.,	Spring,	Pumped,				
		Drilled wells,	Pumped,				
		Springfield Cons. W. Co.					
Marcus Hook, Delaware Co.,	Three oil refineries,	Delaware River and drilled well					

Mogeetown, Montgomery County	Richardson & Ross Quarry Co.,	Schuylkill River,	Pumped,	12,500		50	
Norristown, Montgomery County	Frank Bolger (stone),	Drilled well,	Pumped,	3,000			
	W. A. Case & Son Mfg. Co.,	Schuylkill River,	Pumped,	8,000			
Pencoyd, Montgomery Co.,	American Bridge Co.,	Schuylkill River and three small tributaries	Pumped,	8,250,000	650 tons,	96	25
		Phila. Municipal,		(28,500)		100	
		Springfield Cons. W. Co.		(3,300)		100	
Phoenixville, Chester Co.,	Phoenix Iron Co.,	Schuylkill River,	Pumped,	4,000,000			
Pottstown, Montgomery County	G. B. Lessig Co.,	Schuylkill River,	Pumped,				
	Pottstown Machine Works,	Three drilled wells,	Pumped,				
Pottstown,	Schuylkill Bridge Works,	Drilled wells,	Pumped,				
Pottstown,	Sotter Brothers,	Drilled wells,	Pumped,				
Pottstown,	Champion Silk Co.,	Drilled well,	Pumped,				
Pottstown,	Eastern Steel Co. (See Pottsville)						
Pottstown,	Ellis Keystone Agriculture Works,	Drilled well,					
		Pottstown G. & W. Co.					
	McClintock-Marshall Construction Co.	Two drilled wells,	Pumped,	$123,000	74 tons,	0	0
	S. G. Flagg & Co. (iron foundry),	Two drilled wells,					
	Warwick Iron & Steel Co.,	Pottstown G. & W. Co.					
		Manatawny Creek,					
		Schuylkill River,					
	Glasgow Iron Co.,	Schuylkill River & drilled well					
Pottsville, Schuylkill Co.,	The Eastern Steel Co.:						
	Blast Furnaces (Pottstown),	Schuylkill River, Manatawny Creek, Six drilled wells,	Pumped,	12,260,000	1,000 tons,	92	to 100°
	Steel mills,	W. Norwegian Creek, two reservoirs 875,000 gals. total		1,300,000	670 tons,	80	50
		Eight deep wells (Aux. from Pottsville W. Co.)					
Reading, Berks County,	The Carpenter Steel Co.,	Schuylkill River,					
	Reading Iron Co.:						
	Ninth St. Mills and Forge,	Drilled wells,	Pumped,	1,590,000	300 tons iron and 20 tons forge	83	few degrees
	Tube Works,	Schuylkill River,	Pumped,	3,500,000	120,000 tons,	70	10
	Sheet Mill,	Schuylkill River,	Pumped,	800,000	150 tons,	80	10
	Scott Foundry,	Reading Municipal works		(30,000)	15 tons,	0	0
	Keystone Furnace,	Schuylkill Canal,	Pumped,	200,000	300 tons,	80	few degrees
		Reading Municipal works		(135,000)			

INDUSTRIAL WATER SUPPLIES, SECTION NO. 3—(MISCELLANEOUS COMPANIES)—Continued

Place	Company	Source	Method	Industrial consumption	Daily amount of product	Returned to stream	Increase in Temperature
				(Gals. per day)		(%)	(°F)
Reading, Berks County,	Reading Iron Co.: Oley St. Mills & Roe Puddler,	Tulpehocken Creek, Schuylkill River (emerg.)	Pumped,	1,600,000	123 tons of muck bars & 85 tons skelp iron	80	10
Schuylkill Haven Coal Storage Yard	Phila. & Reading Coal & Iron Co.,	Pine Hill W. Co.,	See description	400,000			
Spring City, Chester Co.,	Pennsylvania Shafting Co.,	Schuylkill Canal,	Pumped,	s6,000			
West Reading, Berks Co.,	Reading Bone Fertilizer Co.,	Schuylkill Canal,	Pumped,	s120,000			
	Textile Machine Works,	Drilled wells,	Pumped,				
	Alexander Hat Co.,	Drilled wells,	Pumped,				
Total from private systems,				90,965,600			

s Water for steam purposes
c Water for cooling or condensing purposes

INDUSTRIAL WATER SUPPLIES, SECTION NO. 3.—(COAL MINING COMPANIES).

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
SCHUYLKILL COUNTY—							
Brockton,	Schuylkill-Lehigh Coal Co. (Now idle)	Small stream,			w	208	1
Darkwater (New Castle Township)	Darkwater Coal Co. (Minersville),	Kelly Hollow Creek (aux.) Pottsville W. Co.	10,000 gal. res. gravity		(100,000)	391	1
Glen Carbon,	Phila. & Reading C. & I. Co. (Glendower Coll.)	West Br. Schuylkill River.	Gravity,	600 (60 pop.)		691	1
Heckscherville,	Phila. & Reading C. & I. Co. (Thomaston Coll.)	Trib. of W. Br. Schuylkill River. Crystal W. Co.,	Gravity,			28	1
Lytle,	Lytle Coal Co.,	Crystal W. Co.,		(64,600)	s(191,400)	1,380	1
Minersville,	Oak Hill Coal Co.,	The Minersville W. Co.			(12,000)	1,030	1
		Drilled well,	Gravity,		s12,200		
	Pine Hill Coal Co.,		Pumped,		s133,000	1,160	1
New Boston,	Mill Creek Coal Co.,	Small stream,	700,000 gal. res. gravity	6,600 (800 pop.)	s100,000	518	1
Port Carbon,	Port Carbon Coal Co.,	Small stream,	20,000 gal. res.		s54,000	160	1
Rohrersville (Foster Township)	Buck Run Coal Co. (Minersville),	Crystal W. Co.,		(12,000)	(118,000)	786	1
St. Clair,	Butcher Creek Coal Co.,	Butcher Creek,	Gravity,		(240 H. P.)*	73	1
	The Mt. Hope Coal Co.,	Pottsville W. Co.,			s	248	1
		Little Mill Creek,			w		
	The St. Clair Coal Co.,	Pottsville W. Co.,			s(200,000)	1,390	1
Tamaqua,	East Lehigh Colliery Co.,	Tamaqua Run Wks.,			s(41,000)	166	1
		Little Schuylkill River	Pumped,		w37,200		
Tuscarora,	Gorman & Campion (Bell Coll.),	Schuylkill River,	Gravity,		110,000	141	1
	Maryd Coal Co. (Midvalley Coal Co.)	Swifts Creek,	Gravity,	5,000 (450 pop.)	s80,000	1,708	1
		Tarman Run,					
Wadesville,	White & Co. (Howard Coll),	Pottsville W. Co.,			(65,000)	189	1
Total from private sysems,				11,600	526,400		

*Capacity of boilers
sWater for steam purposes
wWater for washing coal

AMBLER BOROUGH, MONTGOMERY COUNTY

AMBLER SPRING WATER COMPANY
UPPER DUBLIN WATER COMPANY

Population 1910 census, 2,649, increase since 1900, 765. Estimated 1915, 3,400a

LOCATION

Eastern Montgomery County, on Wissahickon Creek, about 17 miles from Philadelphia; on Bethlehem Branch of Philadelphia & Reading Ry. Range of elevations 171 to 274.

INDUSTRIES

Asbestos manufacturing plant, asbestos shingle, slate and sheathing works, structural iron works and manufacturing of leather.

WATER SUPPLY

Ambler Spring Water Co., incorporated 1892 for Ambler Borough. Supplies Upper Dublin Township, through charter of Upper Dublin Water Co., incorporated 1909, having same stockholders.

SOURCE AND COLLECTION

Two small tributaries of Wissahickon Creek in borough; 8,000,000 gallon Loch Alsh and 12,000,000 gallon Loch Linden reservoirs, 1 mile northeast of borough, on hillside about 0.5 mile below source. Each reservoir fed by a number of adjacent springs in sandstone formation. Water soft. Small reservoir on tributary about 0.5 mile north of other reservoirs has 8-inch gravity main about 3,000 feet to Loch Alsh.

About 0.33 mile south of reservoirs is abandoned quarry fed by several springs; reported flow of springs 180,000 gallons daily. Water pumped through 6-inch force main about 0.4 mile to 100,000 gallon water tower near reservoirs; or pumped direct to system. Pumping equipment consists of a 720,000 gallon Worthington duplex pump, 360,000 gallon Blake pump, 720,000 gallon electrically driven Gould pump and two 100 hp. boilers. Water medium hard.

DISTRIBUTION

By gravity through 12-inch main from reservoirs to lower parts of borough. Higher points served from distributing tower by gravity. Pressures 20 to 70 pounds. Distributing mains as follows:

Size (inches),	12	10	8	6	4	3 & smaller	Total
Length (miles),	0.5	1.4	1.0	3.8	11.5	2.2	20.4
Per cent.,	2	7	5	19	56	11	100

Eighty fire hydrants.

CONSUMPTION

Supply to 5,000 people through 580 taps in borough and 300 in township; 416 taps metered, 2 industrial. No means of measuring consumption; assuming 30 gallons per capita, would be 150,000 gallons daily, all domestic.

INDUSTRIAL SUPPLIES

The Keasbey & Mattison Mfg. Co., are supplied by Upper Dublin Water Co., for drinking purposes. Industrial supply taken from Wissahickon Creek and pumped into two storage reservoirs.

AUBURN BOROUGH, SCHUYLKILL COUNTY

THE AUBURN WATER COMPANY

Population 1910 census, 921; increase since 1900, 76. Estimated 1915, 950a

LOCATION

Southern Schuylkill County, along Schuylkill River at mouth of Bear Creek. Eastern terminus of Schuylkill and Susquehanna Branch of Philadelphia & Reading Ry., on Schuylkill Division of Pennsylvania R. R.

INDUSTRIES

Agricultural district; knitting mill, shirt factory and seamless tube company.

WATER SUPPLY

The Auburn Water Co., incorporated 1897 for Auburn Borough.

SOURCE AND COLLECTION

(1) Stony Creek, tributary of Schuylkill River; 150,000 gallon reservoir 3.5 miles south of borough and 1.5 miles below source.

(2) Bear Creek, small tributary of Stony Creek rising in Blue Ridge Mountains; small intake connected by 6-inch pipe to delivery main from reservoir. Water soft.

DISTRIBUTION

By gravity through 8-inch and 6-inch mains; 25 fire hydrants.

CONSUMPTION

Supply to 750 people; 145 domestic and 5 industrial taps, 1 metered. No means of measuring consumption; assuming 30 gallons per capita would be 22,500 gallons daily, domestic. Industrial consumption probably 60,000 gallons daily. Supplies Philadelphia & Reading Ry. for engines and station.

AVONDALE BOROUGH, CHESTER COUNTY

AVONDALE WATER COMPANY

Population 1910 census, 668; increase since 1900, 28. Estimated 1915, 700a

LOCATION

Southern Chester County, on White Clay Creek, 38 miles from Philadelphia; on Central Division of Philadelphia, Baltimore & Washington R. R.

WATER SUPPLY

Avondale Water Co., incorporated 1901 for Avondale Borough.

SOURCE AND COLLECTION

Spring in bottom of old quarry; capacity 5,000,000 gallons per day. Water pumped directly into distributing system. Pumping equipment 216,000 gallon Deming triplex pump 25 hp., gas engine, 16 hp. electric motor and 10 hp. water wheel.

DISTRIBUTION

By pumping to distributing system with connection to 396,000 gallon equalizing reservoir 120 feet above pumps; pressures 35 to 55 pounds; 1.4 miles distributing mains, 4-inch and 6-inch; 11 fire hydrants, 6-inch.

CONSUMPTION

Supply to 500 people; through 90 taps, 4 metered, industrial. Stated average daily consumption 40,000 gallons, 32,000 domestic and 8,000 industrial; measured by pump displacement.

BIRDSBORO BOROUGH, BERKS COUNTY

BIRDSBORO WATER COMPANY

Population 1910 census, 2,930; increase since 1900, 666. Estimated 1915, 3,100a

LOCATION

Southern Berks County, on west bank of Schuylkill River at mouth of Hay Creek, 9 miles southeast of Reading; connected with Reading and Philadelphia by main line of Philadelphia & Reading Ry. and Schuylkill Division of Pennsylvania R. R.; connected with Reading also by electric line of Reading Transit Co. Elevation in built-up portions varies by about 100 feet.

INDUSTRIES

Furnaces and rolling mill of E. & G. Brooke Iron Co., large foundries and machine shops of Birdsboro Steel Foundry and Machine Co., two shoe factories and hosiery mill.

WATER SUPPLY

Supplied since 1886 by Brooke Iron Co., system being taken over in 1900 by Birdsboro Water Co., stock held principally by owners of Brooke Iron Co., and Birdsboro Steel Foundry and Machine Co.

SOURCE AND COLLECTION

(1) Stimsons Run, (2) Indian Run, (3) Springs, (4) Hay Creek.

All these supplies, including emergency pumping plant, are close together and about 2 miles southeast of borough at elevation approximately 200 feet above same.

(1) Stimsons Run, small tributary of Hay Creek from northwest; intake about 0.25 mile above mouth; watershed area about 0.5 square mile. An 8-inch delivery main about 3,500 feet long leads to junction with 10-inch line from Indian Run reservoir. Water soft.

(2) Indian Run, about 0.25 mile above mouth 12,000,000 gallon storage reservoir; watershed area approximately 1.25 square miles. A 10-inch main extends about 0.25 mile, where it is joined by 8-inch from Stimsons Run. From this point two mains, one 10-inch and other 16-inch, deliver to borough. Water soft.

(3) Number of springs between Hay Creek and Indian Run dam piped short distance to pool at pumping station; estimated dry weather yield of springs about 75,000 gallons per day.

(4) Hay Creek used as emergency supply in severe drought; has been used but once. Water pumped from creek directly into delivery mains. Pumps operated by water power generated by 14 hp. 9-inch turbine under 24 feet head.

DISTRIBUTION

By gravity through two mains, 16-inch and 10-inch, about 2 miles in length; pressures 50 to 80 pounds; 8.5 miles of mains, including delivery pipes; 40 fire hydrants, 8-inch.

CONSUMPTION

Supply to 2,700 people; 625 taps. Stated consumption 500,000 gallons daily, 300,000 gallons industrial and 200,000 gallons domestic. No means of measurement.

BOWERS STATION (MAXATAWNY TWP.), BERKS COUNTY

FLINT HILL WATER COMPANY

Estimated 1915 population, 200a

LOCATION

Northeastern Berks County, Maxatawny Township; at headwaters of Saucony Creek, tributary of Maiden Creek; on Reading Division of Philadelphia & Reading Ry.

INDUSTRIES

Stone works, fertilizer plant and creamery.

WATER SUPPLY

Flint Hill Water Co., incorporated in 1879 for Bowers Station.

SOURCE AND COLLECTION

Large spring 1 mile south of village; 5-inch pipe short distance to 10,800 gallon distributing reservoir about 100 feet above village.

DISTRIBUTION

By gravity through 1 mile of 3-inch pipe; pressure about 30 pounds; 3 fire hydrants.

CONSUMPTION

Supply to 200 people; 39 taps. Stated consumption 3,500 gallons daily, 1,400 gallons domestic and 2,100 gallons industrial. No means of measurement.

BROCKTON (SCHUYLKILL TWP.), SCHUYLKILL COUNTY

MOSS GLEN WATER COMPANY
(Philadelphia & Reading Coal & Iron Co.)

Estimated 1915 population, 400.

LOCATION

Eastern Schuylkill County, Schuylkill Township, north bank of Schuylkill River; on Philadelphia & Reading Ry. and Eastern Pennsylvania Rys.

INDUSTRIES

Mining village of Philadelphia and Reading Coal and Iron Co.

WATER SUPPLY

Moss Glen Water Co., incorporated 1905 for Schuylkill Township, owned by Philadelphia & Reading Coal and Iron Co. (See New Philadelphia.)

SOURCE AND COLLECTION

Supply by arrangement with Silver Creek Water Co., connection near intake dam on Big Creek in Blythe Township. (See New Philadelphia.)

DISTRIBUTION

By gravity through 12-inch main, 2,527 feet to 8-inch main, 4,873 feet to Brockton; pressures up to 190 pounds, controlled by regulating valve; about 1.2 miles distributing mains, 4-inch to 8-inch; 5 fire hydrants.

CONSUMPTION

Supply to 180 people; 20 taps. Average daily consumption 15,000 gallons, all domestic. No means of measuring. Supplies water to main of Middleport Water Co., connecting just west of Brockton. (See Middleport.)

INDUSTRIAL

Maryd Coal Co. takes water from overflow of intake used as auxiliary supply.

BOYERTOWN BOROUGH, BERKS COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 2,433; increase since 1900, 724. Estimated 1915, 3,600a

LOCATION

Eastern Berks County, near Montgomery County line, at headwaters small tributary of West Swamp Creek, tributary of Perkiomen Creek; on Colebrookdale Branch of Philadelphia & Reading Ry. and Oley Valley Ry. Range of elevation 362 to 418.

INDUSTRIES

Boyertown Casket Mfg. Co., two knitting mills, carriage factory, two cigar factories and foundry.

WATER SUPPLY

Municipal works purchased 1898 from Boyertown Water Co., incorporated 1856 for Boyertown.

SOURCE AND COLLECTION

Springs 2.25 miles northwest of borough. Those at Borough Farm, at elevation 753, piped through 4-inch line 3,800 feet to junction with 4-inch line 2,400 feet long from West Farm, elevation 583. A 10-inch line leads from junction 9,500 feet to abandoned pumping station on Ironstone Creek, where it reduces to 6-inch for 1,200 feet to reservoir at elevation 463; fed by three springs from north through 6-inch pipe 2,700 feet long. Minimum daily flow of springs measured by weirs: West Farm, 200,000 gallons; Borough Farm, 66,000 gallons; springs in borough, 21,000; total, 287,000 gallons.

DISTRIBUTION

By gravity through 12-inch main; pressures 20 to 43 pounds.

Distributing mains as follows:

Size (inches),	12	8	6	3	2	Total
Length (miles),	0.2	1.4	3.4	0.1	0.2	5.3
Per cent.,	4	26	64	2	4	100

Thirty-one fire hydrants.

CONSUMPTION

Supply to 3,400 people; 450 taps. Stated average consumption 144,000 gallons daily. No means of measurement.

COST AND REVENUE

Total cost of works, $59,800; annual operating expenses, $300; gross revenue, $6,900.

CHESTER CITY, UPLAND AND MARCUS HOOK BOROUGHS, DELAWARE COUNTY

THE NEW CHESTER WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Chester City,	38,537	4,549	42,000a
Upland,	2,221	90	2,300b
Marcus Hook,	1,573	364	1,700b

LOCATION

Extreme southeastern Delaware County, along Delaware River, 12 miles from Philadelphia; on Philadelphia, Baltimore & Washington R. R.; Philadelphia Division of Baltimore & Ohio R. R.; Chester & Delaware River R. R.; Philadelphia Rapid Transit Co. and Southern Pennsylvania Traction Co.

INDUSTRIES

Manufacturing and commercial town, with considerable shipping trade.

WATER SUPPLY

The New Chester Water Co., incorporated 1885 for Chester City, purchased South Ward Water Works, a municipal system built in 1867. It owns franchises of following companies:

Date	Inc.	Incorporated for
Eddystone Water Co.,	1887	Part of Ridley Township
Linwood Water Co.,	1895	Lower Chichester Township
Penn Water Co.,	1885	North Chester Borough
South Chester Water Co.,	1885	South Chester Borough
Upland Water Co.,	1885	Upland Borough
Chichester Water Co.,	1907	Marcus Hook Borough
Edgemont Water Co.,	1908	Chester Township

SOURCE AND COLLECTION

Delaware River intake, 25 feet below water surface, on city side of ship channel, opposite Fulton Street. Water pumped through 30-inch force main 4.5 miles to two reservoirs on Harrison Hill, north of pumping station. Pumping equipment one 10,000,000 gallon Snow pump, two 5,000,000 gallon Holly pumps, two Heine 650 hp. boilers and five tubular 400 hp. boilers. Reservoirs used as subsidence basins; capacity of each 8,000,000 gallons. Hypochlorite added in these basins three or four hours before filtering.

From reservoirs water enters 8,000,000 gallon mechanical filter plant thence to 3,000,000 gallon filtered water reservoir. Water medium hard.

DISTRIBUTION

By gravity from filtered water reservoir; pressures from 70 to 84 pounds. Distributing mains as follows:

Size (inches),	30	24	20	12	10	9	8	7
Length (miles),	3.5	2.3	4.0	7.6	2.9	0.2	8.8	0.3
Per cent.,	4	3	5	9	3	----------	11	----------

Size (inches),	6	5	4	2	1 & smaller	Total
Length (miles),	35.4	0.6	10.6	5.2	4.6	86.0
Per cent.,	41	1	12	6	5	100

Two hundred and forty fire hydrants, 4½-inch.

CONSUMPTION

Population of 55,000 supplied in area of 12 square miles, including Chester City, Upland and Marcus Hook boroughs, Chester and Lower Chichester townships. Average daily consumption 3,500,000; maximum 4,500,000 gallons; measured by pumpage and meters; one-half domestic, one-half industrial and city use.

INDUSTRIAL SUPPLY

In Marcus Hook three large oil refineries obtain industrial supply from Delaware River and domestic supply from drilled wells. A barrel works obtains entire supply from dug well.

COATESVILLE BOROUGH, CHESTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 11,084; increase since 1900, 5,363. Estimated 1915, 13,912

LOCATION

Western Chester County, along West Branch of Brandywine Creek, 38 miles from Philadelphia; on main line of Pennsylvania R. R.

INDUSTRIES

Principally manufacturing of iron.

WATER SUPPLY

Municipal works built in 1871. Large reservoir and filter plant taking water from new source is now under construction.

PRESENT SOURCE AND COLLECTION

(1) Sucker Run; intake dam 0.5 mile within borough line diverts water to 90,000 gallon settling basin. Two sets of triplex pumps, combined capacity 500,000 gallons daily, force water to two distributing reservoirs,—one of capacity 2,000,000 gallons, just above pumping station and 132 feet above business section; the other 1,500,000 gallon capacity, 1,400 feet west of first and connected to it.

(2) Hefners Run, small tributary of Sucker Run; 1,000,000 gallon storage reservoir, 153 feet above pumping station, filled by pipe line from Hefners Run intake. Water treated with hypochlorite of lime before entering reservoir.

In droughts, auxiliary supply obtained from Octoraro Water Co., subsidiary of Pennsylvania R. R., or from 1,500,000 gallon pump used for boiler and fire purposes at Ashby and Baileys silk mill.

PRESENT DISTRIBUTION

By gravity through 12 miles of mains; pressure 50 pounds.

CONSUMPTION

Average daily consumption 1,000,000 to 1,500,000 gallons or about 66 gallons per capita.

PROPOSED SOURCE AND COLLECTION

Rock Run, tributary of West Branch Brandywine Creek; 332,000,000 gallon impounding reservoir 1.5 miles above mouth; watershed area 5 square miles; elevation of overflow 485.

By gravity to filter plant, consisting of two units, covered slow sand, capacity of each 750,000 gallons daily; capacity of filtered water basin 11,000 gallons. Apparatus for hypochlorite treatment will be ready for use if necessary. At certain times, a 2,000,000 gallon centrifugal pump at filters will pump from 18-inch supply main to 10-inch intake pipe to filters.

PROPOSED DISTRIBUTION

By gravity from filters, through 18-inch main, 13,300 feet long, with 16-inch branch, near northern borough line, to present distributing reservoir.

A 16-inch main to booster pump station for high service district, including all land north of Pennsylvania R. R. Two electrically operated centrifugal pumps will raise water through 8-inch force main 1.200 feet to 200,000 gallon reservoir, at elevation 590, in extreme northern part of borough.

DOWNINGTOWN BOROUGH, CHESTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 3,326; increase since 1900, 1,193. Estimated 1915, 3,500a

LOCATION

Central Chester County, on East Branch Brandywine Creek; on Pennsylvania R. R., Philadelphia & Reading Ry. and West Chester Street Ry. Range of elevations, 50 feet.

INDUSTRIES

Four paper mills, foundry, machine shop, brick works, motor truck factory, boiler works, shirt factory and chair bottom factory.

WATER SUPPLY

Municipal works installed in 1895.

SOURCE AND COLLECTION

Pine Run and Copeland Run intakes, each watershed area 0.5 square mile. Pumping station on Davis Run, West Bradford Township, used in very dry seasons. Pumping equipment a 576,000 gallon pump and a 25 hp. boiler. Water soft.

DISTRIBUTION

By gravity through 1 mile of 12-inch and 3 miles of 10-inch mains; pressures 20 to 48 pounds; about 4 miles distributing mains; 40 fire hydrants.

CONSUMPTION

Supply to 3,400 people; 800 taps, 8 domestic and 7 industrial metered. No means of measuring consumption; assuming 40 gallons per capita, would be 136,000 gallons daily.

COST AND REVENUE

Total cost of works, $115,000; gross revenue, $8,000.

EAST GREENVILLE BOROUGH, MONTGOMERY COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,235; increase since 1900, 341. Estimated 1915, 1,700a

LOCATION

Extreme northern corner of Montgomery County, on Perkiomen Creek and Perkiomen R. R.

WATER SUPPLY

Municipal works built in 1895.

SOURCE AND COLLECTION

Perkiomen Creek; intake 1 mile west of borough. Two 345,600 gallon centrifugal pumps with 10-inch suction and 8-inch discharge raise raw water to 455,000 gallon sedimentation basin. Water flows through 645,000 gallon mechanical filtering unit to 9,000 gallon clear water basin, from which it is pumped by 150,000 gallon pump through 8-inch pipe about 1 mile long to 132,000 gallon standpipe in borough. Water soft.

DISTRIBUTION

By gravity through 8-inch main; pressures 50 to 96 pounds; 2.5 miles distributing mains, 4-inch to 8-inch; 27 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,500 people; 356 taps, 8 metered industrial. Average daily consumption 75,000 gallons, 65% estimated domestic, 35% metered industrial.

COST AND REVENUE

Total cost of works, $26,500; annual operating expenses, $1,950; gross revenue, $2,511.

ESTERLY (EXETER TWP.), BERKS COUNTY

PRIVATE SUPPLY

Estimated population, 200b

LOCATION

Southern Berks County, on Antietam Creek, 2.7 miles east of Reading; on Reading Transit Co.'s line.

INDUSTRIES

Residential suburb of Reading; agriculture.

WATER SUPPLY

Private system of Amos Reiff.

SOURCE AND COLLECTION

Large spring owned by Mr. Reiff, 0.5 mile southwest of village on eastern slope of Neversink Mountain piped to 12,000 gallon reservoir at spring; flow estimated at 50,000 gallons daily, decreasing in summer. Water medium hard.

DISTRIBUTION

By gravity through 1,400 feet of 2-inch pipe with 3,000 feet of 1-inch.

CONSUMPTION

Supply to 120 people; 29 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 3,600 gallons daily, all domestic.

FLEETWOOD BOROUGH, BERKS COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,394; increase since 1900, 416. Estimated 1915, 1,500b

LOCATION

Northeastern Berks County, on Willow Creek, tributary of Maiden Creek, 11 miles northeast of Reading; on East Pennsylvania Branch of Philadelphia & Reading Ry. and Allentown & Reading Traction Co.

INDUSTRIES

Foundry and machine shops, hosiery mills and silk mill.

WATER SUPPLY

Municipal works built 1890 by Fleetwood Water Co., incorporated 1889 for Fleetwood Borough; purchased by borough in 1911.

SOURCE AND DELIVERY

Five springs 1.5 miles north of borough, water piped to 175,000 gallon reservoir formed by small dam across valley. Gravity main leads to borough.

CONSUMPTION

Supply to about 1,000 people; 210 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 30,000 gallons daily.

PROPOSED

Five additional springs about 0.75 mile above present reservoir. Water piped from intake basins to 4-inch line from largest spring; 4-inch enlarges to 6-inch and connects with gravity main from present reservoir.

GLENSIDE (SPRING TWP.), BERKS COUNTY

GLENSIDE WATER COMPANY

Estimated population, 550a

LOCATION

Central Berks County, on west bank of Schuylkill River, northwest of Reading.

WATER SUPPLY

Glenside Water Co., incorporated 1902 for Spring Township.

SOURCE AND DISTRIBUTION

Drilled well in village. Water pumped by Downie deep well pump, connected to electric motor; 6-inch force main 60 feet to distributing system with automatic connection to standpipe, which stops pump when standpipe is full. Pressures 20 to 50 pounds; 3 miles distributing mains, 4-inch and 6-inch; 5 fire hydrants.

CONSUMPTION

Supply to 550 people; 111 taps. Stated average consumption 59,600 gallons, all domestic. No means of measurement.

GRAND VIEW SANATORIUM (LOWER HEIDELBERG TWP.), BERKS COUNTY

PRIVATE SUPPLY

Estimated population, 20

LOCATION

Southwestern Berks County, at headwaters of Little Cacoosing Creek, tributary to Tulpehocken Creek, and on mounains at elevation 800; 2 miles south of Wernersville. Population increased to 200 in summer.

WATER SUPPLY

Private supply from springs directly back of hotel and 150 feet above it; combined capacity 100,000 gallons. Drinking water obtained from Pavilion mineral spring, just east of hotel, piped to first floor. Water from this spring also bottled and sold. Pressures 10 to 60 pounds.

GRILL (CUMRU TWP.), BERKS COUNTY

GRILL WATER COMPANY

Estimated population, 180b

LOCATION

Southern Berks County, on Angelica Creek, 3 miles southwest of Reading. Farming district.

WATER SUPPLY

Grill Water Co., incorporated 1904 for Grill.

SOURCE AND COLLECTION

Springs 1.5 miles southeast of village. Water piped 150 feet to 3,200 gallon reservoir and thence 1 mile to another reservoir 18 feet diameter and 12 feet deep. Water medium hard.

DISTRIBUTION

By gravity through 2-inch pipe; pressure about 20 pounds.

CONSUMPTION

Supply to 50 people; 15 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 1,500 gallons daily all domestic.

HAMBURG BOROUGH, BERKS COUNTY

WINDSOR WATER COMPANY

Population 1910 census, 2,301; decrease since 1900, 14. Estimated 1915, 3,000

LOCATION

Northern central Berks County, along east bank of Schuylkill River, 15 miles north of Reading; on Schuylkill Division of Pennsylvania R. R. and Hamburg & Reading Electric Ry.; Philadelphia & Reading Ry. along opposite bank of river.

INDUSTRIES

Three knitting mills, silk mills, four broom works, engine works, three foundries, hosiery mill, plow works, nipple works, motor truck works and boiler works. A State Sanatorium for Tuberculosis is situated about 1.5 miles northeast of borough.

WATER SUPPLY

Windsor Water Co., incorporated 1889 for Hamburg Borough; works completed 1891.

Private system of State Sanatorium installed in 1914.

WINDSOR WATER COMPANY

SOURCE AND COLLECTION

(1) Furnace Run; small intake dam 3.5 miles northeast of borough and 342 feet above; watershed area 2,200 acres owned by company. An 8-inch main to 1,500,000 gallon storage and distributing reservoir. Water soft.

(2) Additional supply from two drilled wells, pumped by air lift to reservoir. Pumping equipment 405 cubic foot air compressor, driven by 50 hp. Fairbanks electric motor, Sweigard deep well pump and 40 hp. vertical boiler in reserve.

Well No. 1, 75 feet from reservoir, 8-inch diameter, 302 feet deep, 100 gallons per minute. Well No. 2, near No. 1, 8-inch diameter, 220 feet deep, 208 gallons per minute.

DISTRIBUTION

By gravity through 8-inch main; pressures 100 to 140 pounds; 3.5 miles distributing mains, 3-inch to 8-inch, one-half 6-inch; 29 fire hydrants.

CONSUMPTION

Supply to 3,000 people; 600 taps; 55 meters, 24 on largest industrial users. Average daily consumption 350,000 gallons, 210,000 domestic, 140,000 industrial; measured by weir and meter.

PRIVATE SYSTEM OF PENNSYLVANIA STATE SANATORIUM

SOURCE AND COLLECTION

Mill Stream, 225,000 gallon intake just north of institution; watershed area about 2 square miles. Water raised to mechanical gravity filter of two units, from which it is pumped to institution. Pumping equipment two 150,000 gallon centrifugal raw water pumps, one 150,000 gallon Platt triplex high duty pump and one 720,000 gallon Platt triplex fire pump.

DISTRIBUTION

By pumping to institution with connection to 85,000 gallon tank or by gravity from tank.

CONSUMPTION

Supply to about 500 people. Amount not stated.

HATBORO BOROUGH, MONTGOMERY COUNTY

HATBORO WATER COMPANY

Population 1910 census, 963; increase since 1900, 140. Estimated 1915, 2,000a

LOCATION

Eastern Montgomery County, near Bucks County line, on Pennypack Creek; on Northeast Pennsylvania R. R. (Philadelphia & Reading). Farming district.

WATER SUPPLY

Hatboro Water Co., incorporated 1897 for Hatboro Borough.

SOURCE AND COLLECTION

Two drilled wells in borough, reported yield 216,000 gallons daily. Water pumped through 6-inch force main 200 feet long to 200,000 gallon standpipe; pumps in duplicate operated by 20 hp. electric motors. Water medium hard.

DISTRIBUTION

By gravity through 6-inch main; pressures 40 to 50 pounds; about 2.1 miles distributing mains, 4-inch and 6-inch; 20 fire hydrants, 2½-inch.

CONSUMPTION

Supply to 1,200 people; 220 taps, with 8 industrial meters. Average daily consumption 55,000 gallons, 97% domestic, 3% industrial; measured by pump displacement.

HONEY BROOK BOROUGH, CHESTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census 581; decrease since 1900, 28. Estimated 1915, 580a

LOCATION

Extreme western Chester County, at headwaters of West Branch Brandywine Creek; on New Holland Branch of Pennsylvania railroad. Farming district.

WATER SUPPLY

Municipal works built in 1896.

SOURCE AND COLLECTION

Three springs forming headwaters West Branch Brandywine Creek, 1.5 miles north of borough. Flow about 103,000 gallons daily collected in 1,200,000 gallon storage and distributing reservoir. Water soft.

DISTRIBUTION

By gravity through 8-inch main 2 miles long; pressures 38 to 42 pounds; 31 fire hydrants, 4-inch.

CONSUMPTION

Supply to 570 people; 140 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 17,100 gallons daily, all domestic.

COST AND REVENUE

Total cost of works, $16,000; annual operating expenses, about $100; gross revenue for 1913, $1,575.

HOUSE OF REFUGE OF EASTERN PENNSYLVANIA (MIDDLETOWN AND EDGEMONT TWPS.), DELAWARE COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 500a

LOCATION

Western Delaware County, Middletown and Edgemont townships, on Rocky Run, small tributary of Chester Creek; watershed area 1 square mile. This institution is for girls; another several miles distant in Thornberry Township for boys. Post-office address, Glen Mills, Pa.

WATER SUPPLY

(1) Rocky Run; small intake dam diverts water to pump well, from which it is raised to power station nearby and used for condensing purposes.

(2) Dug well, 20 feet diameter, 20 feet deep, on bank 30 feet from stream; another of same size 300 feet away and 70 feet from stream; average yield reported, 40,000 gallons daily. Water raised by two 144,000 gallon electrically-driven Deming pumps to 100,000 gallon steel tank elevated above buildings; supplied by 8 and 6-inch gravity lines for domestic purposes; pressures 65 to 80 pounds.

CONSUMPTION

Supply to 500 people. Stated average consumption 40,000 gallons, all domestic; measured by pump displacement.

HYDE PARK AND VICINITY (MUHLENBERG TWP.), BERKS COUNTY

READING SUBURBAN WATER COMPANY
(H. E. Ahrens and others)

Estimated 1915 population, 2,500a

LOCATION

Hyde Park, Bernharts, Spring Valley, Hyde Crest, Pottsville Pike, Hydevilla, Rosedale, Belmont and Frush Valley villages, in central Berks County, north of Reading; on Philadelphia & Reading Ry. and Reading Transit Co.'s electric lines.

INDUSTRIES

Residential suburbs of Reading; brewery, dye works and towel factory.

WATER SUPPLY

Reading Suburban Water Co.,, incorporated 1902 for Muhlenberg Township; owned by H. E. Ahrens and others.

SOURCE AND COLLECTION

An 8-inch drilled well near Frush Valley Run, 1.5 miles northeast of Hyde Park and 200 feet above low part of district. Test of well yielded 250 gallons per minute with no variation of water level. Water raised by air lift 220 feet to small pump well. Pumping equipment, air compressor, capacity 280 cubic feet of air per minute, belt-connected to 50 hp. Fairbanks Morse electric motor. A 6-inch gravity line leads from pump well 300 feet to 250,000 gallon storage and distributing reservoir. Water hard.

DISTRIBUTION

By gravity through 10-inch main, reducing to 8-inch, 1,644 feet to distributing system; pressures 25 to 70 pounds; distributing mains 8.4 miles, 1-inch to 10-inch, mostly 4-inch and 6-inch; 2 fire hydrants.

CONSUMPTION

Supply to 1,500 people; 307 taps, 7 industrial metered. Stated average daily consumption 53,000 gallons, 90% domestic, 10% industrial; measured by pump displacement.

JENKINTOWN BOROUGH, MONTGOMERY COUNTY

JENKINTOWN WATER COMPANY
MORELAND SPRING WATER COMPANY

Population 1910 census, 2,968; increase since 1900, 877. Estimated 1915, 5,000a

LOCATION

Southeastern Montgomery County, near headwaters of Tacony Creek, just outside boundary of Philadelphia City; on Philadelphia & Reading Ry. and Philadelphia Rapid Transit line. Residential suburb of Philadelphia.

WATER SUPPLY

Jenkintown Water Co., incorporated 1889 for Jenkintown, and Moreland Spring Water Co., incorporated 1909 for Moreland Township, operated as one company through stock ownership. In 1910 Moreland Spring Water Co. purchased property and franchise of following:

Company	Inc.	Incorporated for
Ogontz Water Co.,	1909	Cheltenham Township
Weldon Water Co.,	1909	Abington Township

SOURCE AND COLLECTION

(1) Pennypack Creek; intake 3.5 miles northeast of borough near village of Bethayres, Moreland Township. A 20-inch intake leads to 300,000 gallon settling basin, from which water flows through mechanical filter having three units, capacity 500,000 gallons each, to 135,000 gallon clear water basin. Water pumped directly into distributing system. Pumping equipment one 1,000,000 gallon Jeanesville pump and three 500,000 gallon Worthington pumps. Water medium hard.

(2) Eight 8-inch drilled wells on east bank of Pennypack Creek near pumping station. Each well connected by 8-inch pipe to 12-inch suction main, from which water is pumped to clear water basin.

DISTRIBUTION

By pumping to distributing system through 12-inch force main 3 miles long, with connection to two elevated tanks, and one standpipe, combined capacity about 600,000 gallons; also 1,000,000 gallon reservoir at Edge Hill. Reservoir and standpipe on hillside about 1.5 miles northwest of borough. Pressures 45 to 155 pounds; 28 miles distributing mains; 112 fire hydrants, 4-inch.

CONSUMPTION

Supply to 5,000 people, 1,260 taps. Average daily consumption 350,000 gallons, all domestic; measured by pump displacement and meter, 1,200 taps metered. Territory supplied includes Jenkintown and nearby sections of Abington and Cheltenham townships.

KENNETT SQUARE BOROUGH, CHESTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 2,049; increase since 1900, 533. Estimated 1915, 2,200b

LOCATION

Southern Chester County, on east and west branches of Red Clay Creek; 30 miles from Philadelphia; along Central Division of Philadelphia, Baltimore & Washington R. R.

WATER SUPPLY

Municipal works built 1846 by Pure Spring Water Co., of Kennett Square; purchased by borough in 1850.

SOURCE AND COLLECTION

Pumping station on small tributary of Red Clay Creek. Water drawn from creek through 6-inch intake and pumped to two standpipes in borough, capacities 150,000 and 45,000 gallons respectively.

In wet season pumps operated by overshot water wheel, capacity 180,000 gallons; during dry season by steam, capacity 360,000 gallons daily.

CONSUMPTION

Average daily consumption 180,000 gallons.

KUTZTOWN BOROUGH, BERKS COUNTY

KUTZTOWN WATER COMPANY
(H. E. Ahrens and others)

Population 1910 census, 2,360; increase since 1900, 1,032. Estimated 1915, 2,500b

LOCATION

Eastern Berks County, on Saucony Creek, tributary of Maiden Creek, 15 miles northeast of Reading and connected with it and Allentown by trolley.

INDUSTRIES

Agriculture; foundry and machine shop, silk mill, three shoe factories, two knitting mills and a creamery. Seat of Kutztown State Normal School.

WATER SUPPLY

Kutztown Water Co., incorporated 1889 for Kutztown Borough.

SOURCE AND COLLECTION

Power station 2 miles north of borough pumps water from Kemps Run and springs nearby to 600,000 gallon reservoir 1.5 miles northwest of borough and 350 feet above. Just north of reservoir 1,000,000 gallon Dean steam pump raises water from drilled well and discharges it into reservoir.

DISTRIBUTION

By gravity through 8-inch main; pressure 100 pounds; 4.7 miles distributing mains, 4-inch to 8-inch, 50% 6-inch.

CONSUMPTION

Supply to 1,100 people; 260 taps. Average daily consumption 150,000 gallons, one-third used by Normal School.

LYONS (MAXATAWNY TWP.), BERKS COUNTY

LYONS WATER COMPANY

Estimated 1915 population, 400a

LOCATION

Northeastern Berks County, Maxatawny Township on tributary of Maiden Creek; 16 miles northeast of Reading; on East Pennsylvania Branch of Philadelphia & Reading Ry.

INDUSTRIES

Flour mills and hosiery mill.

WATER SUPPLY

Lyons Water Co., incorporated 1866 for Maxatawny Township.

SOURCE AND COLLECTION

Nine springs from about 0.5 mile south and southwest of village. Seven piped to 117,000 gallon reservoir and other two to 16,000 gallon reservoir. Water soft.

DISTRIBUTION

By gravity through 4-inch main from larger reservoir to eastern part of village and 3-inch main from smaller reservoir; pressures 8 to 25 pounds; no fire hydrants.

CONSUMPTION

Supply to 400 people; 80 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 12,000 gallons daily, domestic.

LYTLE AND NEIGHBORING VILLAGES, SCHUYLKILL COUNTY

CRYSTAL WATER COMPANY
(Philadelphia and Reading Coal & Iron Company).

Estimated 1915 population; Lytle, 2,000b; Forestville, 160b; Branch Dale, 813b; Llwellyn, 412b; scattered districts, 1,615b.

LOCATION

Western central Schuylkill County, on West Branch of Schuylkill River; on Philadelphia & Reading Ry.

INDUSTRIES

Mining operations of Philadelphia & Reading Coal & Iron Co.

WATER SUPPLY

Crystal Water Co., incorporated 1890 for Cass Township; owned and operated by Philadelphia & Reading Coal & Iron Co. (see New Philadelphia).

SOURCE AND COLLECTION

West Branch of Schuylkill River; 55,323,000 gallon reservoir, 3 miles below source and 2 miles north of Branch Dale; watershed area 4.5 square miles. Water soft.

DISTRIBUTION

By gravity through 1 mile of 12-inch main following river to Forestville, where it divides, a 10-inch branch east to Lytle, a 10-inch west to Branch Dale and an 8-inch continuing south along river to Llewellyn. The 10-inch branch east connects to 12-inch main of Silver Creek Water Co.; pressures 10 to 190 pounds. Distributing mains as follows:

Size (inches,	12	10	8	6	4	2	Total
Length (miles),	1.6	3.8	0.5	3.7	1.8	1.0	12.4

Thirty-two fire hydrants.

CONSUMPTION

Supply to 5,000 people; 430 taps. Stated average daily consumption 2,162,000 gallons, 30% domestic, 70% industrial; measured by weir.

MALVERN BOROUGH, CHESTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,125; increase since 1900, 150. Estimated 1915, 1,200a

LOCATION

Eastern Chester County, at headwaters of Crum Creek, 22 miles from Philadelphia; on main line Pennsylvania R. R.

INDUSTRIES

Platinum works and Hires Condensed Milk Co.

WATER SUPPLY

Municipal works built by Malvern Water Co., incorporated 1889 for Malvern Borough; purchased in 1890 by borough.

SOURCE AND COLLECTION

Dug well, 20 feet diameter and 18 feet deep, east of borough. Water pumped 600 feet to two standpipes, one 94,000 gallon steel and one 10,000 gallon wooden. Pumping equipment a 267,840 gallon Deane pump driven by gas engine. Water soft.

DISTRIBUTION

By gravity through 8-inch main; pressures 40 to 75 pounds; 2.5 miles distributing mains, 4-inch to 8-inch; 23 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,200 people. No means of measuring consumption; assuming 30 gallons per capita, would be 36,000 gallons daily; all domestic.

COST AND REVENUE

Total cost of works, $14,000; annual operating expenses, $1,000.

INDUSTRIAL SUPPLY

Hires Condensed Milk Co. has private system; pump from spring and drilled wells to wooden tanks, and purchase from Springfield Consolidated Water Co. by special permission from borough.

MEDIA BOROUGH, MOYLAN AND WALLINGFORD VILLAGES, AND UPPER AND NETHER PROVIDENCE TOWNSHIPS, DELAWARE COUNTY

MUNICIPAL WATER WORKS
THE WALLINGFORD WATER COMPANY

	Population 1910	Estimated 1915	Population supplied
Media,	3,562	3,756a	3,756
Moylan,			575
Wallingford,			525
Parts of Upper and Nether Providence Twps.,			450
Total,			5,306

LOCATION

Central Delaware County, on Ridley Creek, 14 miles from Philadelphia; on Central Division of Philadelphia, Baltimore & Washington R. R., Philadelphia Rapid Transit line and Southern Pennsylvania Transit line. Built-up portion on knoll above creek. Seat of Pennsylvania Training School for Feeble-Minded.

WATER SUPPLY

Works built in 1854, purchased in 1871 by borough. By special act of Legislature supplies outside district in Nether Providence Township, also a few consumers in Upper and Nether Providence townships. The Wallingford Water Co., incorporated 1884 for Nether Providence Township, buys water from the municipal system.

SOURCE AND COLLECTION

Ridley Creek; pumping station and filter plant about 0.25 mile west of borough; watershed area 32 square miles. A 12-inch intake pipe 600 feet to pumps. Water pumped through 1,000,000 gallon rapid sand pressure filter direct to system through 12-inch main. Pumping equipment a 372,000 gallon Cassin pump and two Gould triplex pumps driven by two horizontal water turbines working under head of 10.8 feet; a 1,000,000 gallon duplex pump driven by steam from two Wetherill boilers, 66 and 88½ hp. respectively. Water soft.

DISTRIBUTION

By pumping direct to system with connection to 1,250,000 gallon equalizing reservoir and 250,000 gallon standpipe on eastern edge of borough; pressures 22 to 100 pounds. Distributing mains as follows:

Size (inches	12	8	6	4	3	2	Total
Length (miles),	0.3	2.0	1.3	10.8	0.2	0.9	15.5
Per cent.,	2	13	8	70	1	6	100

This table includes a 4-inch main 1 mile long of the Wallingford Water Co. There are 95 fire hydrants, 4-inch, 8 in township.

CONSUMPTION

Supply to 5,300 people through 1,174 taps in borough and 51 in Nether Providence Township, by the Wallingford Water Co. The Nether Providence Water Co., incorporated 1886 for Nether Providence Township, apparently has not been operating since 1912 and this district and the village of Moylan now receive a supply from the Media Borough system. Average daily consumption 515,000 gallons, all domestic, measured by pump displacement. Metered consumption 23,774 gallons, by 17 meters.

COST AND REVENUE

Total cost of works, $153,245; annual operating expenses, $5,500; gross revenue (1913), $16,860.

MIDDLEPORT BOROUGH, SCHUYLKILL COUNTY

MIDDLEPORT WATER COMPANY
(Philadelphia & Reading Coal & Iron Company)

Population 1910 census 1,100; increase since 1900, 560. Estimated 1915, 1,100

LOCATION

Eastern central Schuylkill County, along Schuylkill River, 7 miles northeast of Pottsville; on Philadelphia & Reading Ry., Pottsville Union Traction line and Eastern Pennsylvania Rys.

WATER SUPPLY

Middleport Water Co., incorporated 1905 for Middleport Borough; owned and operated by Philadelphia & Reading Coal and Iron Co. (See New Philadelphia).

SOURCE AND COLLECTION

Supply by arrangement with Moss Glen Water Co., connecting just west of Brockton (q. v.).

DISTRIBUTION

By gravity through 8-inch main 700 feet long; pressures 80 to 90 pounds; 0.9 mile distributing mains, 4-inch to 8-inch; 12 fire hydrants, 4-inch.

CONSUMPTION

Supply to 400 people; 50 taps. Average daily consumption 30,000 gallons, all domestic. No means of measurement.

MILLMONT, BOYERS HEIGHTS, OAKBROOK, BROOKSIDE AND READING HEIGHTS, BERKS COUNTY

ANGELICA WATER AND ICE COMPANY

Combined estimated 1915 population, 1,600

LOCATION

Southern Berks County, Cumru Township, on west bank of Schuylkill River, south of Reading; on Schuylkill Division of Pennsylvania R. R. and Reading Transit line.

INDUSTRIES

Residential suburb of Reading; boiler and engine works, two stove works, tube works and hosiery mill.

WATER SUPPLY

Since 1885 from Angelica Water and Ice Co., incorporated 1875 for Cumru Township as Angelica Water Co.; name changed in 1891.

SOURCE AND COLLECTION

Angelica Creek, tributary of Schuylkill river 1 mile south of Reading. Four dams on creek; pumping station at dam No. 1, about 2 miles from mouth of creek. Watershed area above intake, 8 square miles. Pumping station contains a turbine and a steam pumping engine; capacity of water power installation 250 gallons per minute; of steam pump, 500 gallons per minute; steam operated only during low water. Water pumped to 300,000 gallon reservoir on hill 1,000 feet southwest of station. Capacity of works 400,000 gallons daily. Water soft.

Reservoirs formed by dams Nos. 2, 3, and 4, used for ice purposes. Storage as follows:

Dam	Area—acres	Capacity—gallons	Location
No. 1,	22½	48,000,000	9,000 feet from mouth of creek
No. 2,	21	24,000,000	Just above No. 1
No. 3,	6½	6,000,000	1,300 feet above No. 2
No. 4,	3½	3,500,000	2,600 feet above No. 3

DISTRIBUTION

By gravity through 8-inch main 1,200 feet long; pressures 40 to 60 pounds; 6.1 miles distributing mains, 4-inch to 8-inch, 46% 6-inch; 22 fire hydrants, 4-inch and 6-inch.

CONSUMPTION

Supply to 1,500 people; 306 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 45,000 gallons daily, all domestic.

MINERSVILLE BOROUGH, SCHUYLKILL COUNTY

MINERSVILLE WATER COMPANY

Population 1910 census, 7,240; increase since 1900, 2,425. Estimated 1915, 10,000a

LOCATION

Central Schuylkill County, on West Branch Schuylkill River, 4 miles west of Pottsville; on Mine Hill and Schuylkill Haven Branch,

Reading Division of Philadelphia & Reading Ry., and Pottsville Union Traction line.

INDUSTRIES

Anthracite mining; several shirt and underwear factories.

WATER SUPPLY

Minersville Water Co., incorporated 1855 for Minersville.

SOURCE AND COLLECTION

Dyers, Wagner and Weeler (or McGinnis) Runs, tributaries, from north, of West Branch Schuylkill River, 3.5 miles north of borough. Water soft.

(1) On Dyers Run, two reservoirs; lower 5,000,000 gallons capacity, 0.5 mile above mouth, upper 1.25 miles above mouth, capacity 70,000,000 gallons; elevation of lower, 1065.

(2) On Wagner Run, 2,000,000 gallon reservoir 0.5 mile above mouth.

(3) On Weeler Run, 1,000,000 gallon reservoir 0.75 mile above mouth.

DISTRIBUTION

By gravity through 14-inch main 4 miles from lower Dyers Run reservoir, receiving 8-inch lines from Wagner and Weeler runs. Elevation of highest point served 957.7, lowest 696.2. Pressures 30 to 160 pounds; 10 miles distributing mains, mostly 8-inch and 6-inch; 41 fire hydrants, nearly all 6-inch.

CONSUMPTION

Supply to 10,000 people; 2,100 taps with 40 meters. Average daily consumption 1,000,000 gallons, 50% domestic, 50% industrial, metered to four coal companies. Portions of Norwegian and Cass townships supplied by branches from gravity supply mains.

MAR LIN VILLAGE

The Mar Lin Water Co., incorporated 1912 for Norwegian Township by the Mar Lin Land Co., to supply Mar Lin village, a real estate development 1 mile east of Minersville on Raccoon Creek. Source of supply Raccoon Creek, but no water is being supplied by company, because population is not sufficient to warrant installation of filter plant required by Department of Health. Dam on Raccoon Creek impounding 855,000 gallons at junction of two main branches about

0.5 mile above its mouth; watershed area 514 acres. Reservoir tract used as pleasure park but eventually will be used for water supply. In 1914, 20 houses were reported built and 250 lots sold. Water now furnished to this community by The Hock, Coombe and Brumm Co. (Mar Lin Land Co.), which purchases water from Minersville Water Company.

MOHNTON BOROUGH AND NEIGHBORING VILLAGES (CUMRU TWP.), BERKS COUNTY

MOHNSVILLE WATER COMPANY (THE)

	Population 1910 census	Increase since 1900	Estimated 1915
Mohnton,	1,536	inc. 1907	1,600b
Edison, Cumru Township,			800b
Shillington, Cumru Township,			1,200b

LOCATION

Southern Berks County, on Wyomissing Creek, 5 miles southwest of Reading; on Lancaster and Reading trolley line. Edison and Shillington 0.5 mile apart, about 3 miles from Reading and 1.5 miles from Mohnton.

INDUSTRIES

Suburban residential. Mohnton:—Two hat factories, two cigar factories, six hosiery mills, two planing mills and box factories. Shillington:—Hosiery mills, flour mills, cigar factories and hat factory.

WATER SUPPLY

The Mohnsville Water Co., incorporated 1885 for Mohnsville village, works built in 1871 as private system.

SOURCE AND COLLECTION

Three sources, Kleinginney Creek, tributary of Wyomissing Creek; a drilled well, and springs.

(1) Small dam across Kleinginney Creek, 1.5 miles west of borough and large storage reservoir formed by dam across creek 1 mile west of borough; watershed area 2 square miles.

(2) Drilled well west of borough; water pumped directly into borough mains; reported yield of well 86,400 gallons daily.

(3) A 230,000 gallon reservoir, directly south of borough; fed by springs and a drift into mountain.

DISTRIBUTION

(1) Low service system supplies Edison and Shillington villages only, valves shut off through 6-inch gravity main from Kleinginney Creek reservoir. Large reservoir held for emergencies.

(2) and (3) High service system supplying borough by gravity main from pumping station; pressures 25 to 80 pounds.

CONSUMPTION

Supply to 2,000 persons; 402 taps. Average daily consumption 50,000 gallons.

MOREA (MAHANOY TWP.), SCHUYLKILL COUNTY

THE MOREA WATER COMPANY
(Dodson Coal Company)

Estimated population, 980a

LOCATION

Northern central Schuylkill County, near headwaters of Mill Creek, tributary of Schuylkill River.

INDUSTRIES

Colliery of Dodson Coal Co.

WATER SUPPLY

The Morea Water Co., incorporated 1893 for Morea; owned by Dodson Coal Co.

SOURCE AND COLLECTION

Two drilled wells, 350 feet deep and springs 0.5 mile west of village. Water collected in 168,000 gallon reservoir, from which it is pumped through 4-inch main to tanks at village.

CONSUMPTION

Supply to 980 people. Stated average daily consumption 338,000 gallons, 210,000 for steam purposes and 128,000 for domestic; measured by pump displacement.

MOUNT PENN BOROUGH, BLACK BEAR, (EXETER TWP.), AND STONY CREEK, (ALSACE TWP.), BERKS COUNTY

MOUNT PENN SUBURBAN WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Mount Penn Borough,	785	(Inc. 1902)	1,600a
Black Bear Village,			100
Stony Creek Village,			200

LOCATION

Southern Central Berks County, Mount Penn directly east of southern part of Reading; on Boyertown and Stony Creek Branch of Reading Transit Co. line.

INDUSTRIES

Residential suburb of Reading; carriage works.

WATER SUPPLY

Mount Penn Suburban Water Co., incorporated 1903 for Mt. Penn Borough.

SOURCE AND COLLECTION

(1) Three springs impounded in 84,600 gallon reservoir on mountainside 3,500 feet north of borough line, at elevation 650. Two are

close to reservoir and piped to it by 4-inch pipe; other 600 feet away, piped to it by 2-inch pipe.

(2) Small tributary of Antietam Creek, with watershed area of 179 acres, supplies 800,000 gallon storage reservoir on Creek near springs; nearby is a 7,300,000 gallon storage reservoir connected to others by 6-inch main. Water soft.

DISTRIBUTION

By gravity through 6-inch main from spring reservoir 1,500 feet to road, thence 2,900 feet to borough line, connecting in borough to distributing system; pressures 75 to 100 pounds; 8.5 miles distributing mains, 1-inch to 6-inch, 50% 4-inch; 36 fire hydrants.

CONSUMPTION

Supply to 1,600 people; 393 taps. Stated average consumption 60,000 gallons daily, 98% domestic, 2% industrial. No means of measurement.

MUHLENBERG STATION (MUHLENBERG TWP.), BERKS COUNTY

MAMMOTH SPRINGS WATER COMPANY

Estimated 1915 population, 52a

LOCATION

Southern central Berks County, Muhlenberg Township, near mouth of Laurel Run, north of Reading; on Schuylkill Division Pennsylvania R. R., and Schuylkill & Lehigh Branch Wilmington & Columbia Division of Philadelphia & Reading Ry.

WATER SUPPLY

Mammoth Springs Water Co., incorporated 1909 for Muhlenberg Township.

SOURCE AND COLLECTION

Two springs on property of E. G. Snyder in valley of Laurel Run near mouth; estimated minimum flow 1,800,000 gallons daily. A 100 g. p. m. pump forces water to 5,000 gallon tank. Water soft.

DISTRIBUTION

By gravity through 1,620 feet of 4-inch pipe and 550 feet of 1-inch and 1½-inch; pressures 60 to 120 pounds.

CONSUMPTION

Supply to 52 people; 15 taps. Average daily consumption 5,000 gallons, all domestic; measured by pump displacement.

MYERSTOWN BOROUGH, LEBANON COUNTY

MYERSTOWN WATER COMPANY

Estimated 1915 population, 3,000a

LOCATION

East central Lebanon County, near headwaters of Tulpehocken Creek; on Harrisburg Division, Lebanon Valley Branch, Philadelphia & Reading Ry. and Reading Transit line.

INDUSTRIES AND INSTITUTIONS

Agriculture, shirt factories, cigar factories, creamery, planing mill and foundry. Seat of Albright College.

WATER SUPPLY

Myerstown Water Co., incorporated 1895 for Myerstown village.

SOURCE AND COLLECTION

Spring on edge of large pond which drains into Tulpehocken Creek; minimum flow, 150,000 gallons daily, about 2.5 miles northwest of borough. Capacity of collecting reservoir 4,000,000 gallons; distributing reservoir 250,000 gallons. A pumping station containing turbine wheel, rotary pump and 15 hp. gasoline engine held in reserve for emergencies. Water soft.

DISTRIBUTION

By gravity through 8-inch main 2 miles in length; pressures 10 to 25 pounds; 4 miles of distributing mains, 4-inch to 8-inch; 25 fire hydrants, 4 inch.

CONSUMPTION

Supply to 3,000 people; 481 taps. Stated average consumption 80,000 gallons daily, 75% domestic, 25% industrial. No means of measurement.

NEW CASTLE (NEW CASTLE TWP.), SCHUYLKILL COUNTY

THE BUTCHER SPRING WATER COMPANY

Estimated 1915 population, 500a

LOCATION

Central Schuylkill County, 3.5 miles north of Pottsville on Mill Creek, tributary of Schuylkill River.

INDUSTRIES

Laurel Run Colliery of Butcher Creek Coal Co., two other collieries.

WATER SUPPLY

The Butcher Spring Water Co., incorporated 1894 for St. Clair Borough, 2 miles southeast of village. Company owned by J. J. Whims Estate. Never supplied St. Clair but is supplying New Castle.

SOURCE AND COLLECTION

Butcher Creek, tributary of West Branch of Schuylkill River, rising about 0.5 mile north of New Castle; 25,000 gallon reservoir just above village. Water, medium hard.

DISTRIBUTION

By gravity through 4,000 feet of mains, 2-inch to 4-inch; pressure 15 pounds.

CONSUMPTION

Supply to 300 people; 50 taps. No means of measuring; assuming 30 gallons per capita, would be 9,000 gallons, domestic, reported as 80% of total. Industrial consumption 2,300 gallons daily.

NEWMANSTOWN (MILL CREEK TWP.), LEBANON COUNTY

THE NEWMANSTOWN WATER COMPANY

Estimated 1915 population, 1,000a

LOCATION

Extreme southeast Lebanon County, Mill Creek Township, in valley of Mill Creek; tributary of Tulpehocken Creek; on Philadelphia and Reading Ry., Lebanon Valley Branch of Harrisburg Division. Farming district.

WATER SUPPLY

The Newmanstown Water Co., incorporated 1892 for Newmanstown.

SOURCE AND COLLECTION

Gold Spring, a small stream disappearing south of village; intake and reservoir 0.5 mile below source and about 1 mile southeast of village; watershed area 0.75 square mile. Several springs feed reservoir. Water very soft.

DISTRIBUTION

By gravity through 1 mile of 6-inch and 1 mile of 2-inch and 4-inch laterals; pressures 70 to 80 pounds; 13 fire hydrants, 3½-inch.

CONSUMPTION

Supply to 1,000 people; 164 taps. Stated average consumption 12,700 gallons, 11,000 domestic and 1,700 industrial. No means of measurement.

NEW PHILADELPHIA BOROUGH, CUMBOLA VILLAGE, BLYTHE TOWNSHIP, SCHUYLKILL COUNTY

SILVER CREEK WATER COMPANY
(Philadelphia & Reading Coal & Iron Company)

Population 1910 census 2,512; increase since 1900, 1,186. Estimated 1915, 3,000b. Estimated population village 1915, 1,500b

LOCATION

East central Schuylkill County, along Schuylkill River at mouth of Silver Creek; Cumbola 1 mile below; on Philadelphia & Reading Ry. and Pottsville Union Traction line.

INDUSTRIES

In mining territory of Philadelphia & Reading Coal & Iron Co.

WATER SUPPLY

Silver Creek Water Co., incorporated 1889 for Blythe Township; owned and operated by Philadelphia & Reading Coal & Iron Co.

Latter company owns and controls companies which furnish supply to their operations and villages in the anthracite fields of central Schuylkill County, near Gilberton and Pottsville; controlled companies as follows:

Sec. No.	Water Company	Inc.	Incorporated for	Supplies to	Character of supply
9	The Anthracite Water Co.,	1882	Mahanoy Twp.,	Gilberton, etc.	Domestic and industrial
3	Silver Creek Water Co.,	1889	Blythe Twp.,	New Phila., etc.	Domestic and industrial
3	The Crystal Water Co.,	1890	Cass Twp.,	Lytle, Forestville, etc.	Domestic and industrial
3	Pine Hill Water Co.,	1904	Landingville Boro.,	North Manheim Water Company.	
3	North Manheim Water Co.,	1904	N. Manheim Twp.,	Schuylkill Haven coal storage yd.	Industrial
3	Moss Glen Water Co.,	1905	Schuylkill Twp.,	Brockton,	Domestic
3	Middleport Water Co.,	1905	Middleport Boro.,	Middleport,	Domestic
9	Oak Grove Water Co.,	1895	W. Butler Twp., Schuylkill County	(*)	
9 & 12	The Good Spring Water Co.	1893	Porter Twp., Schuylkill County	(*)	
9	Zerbe Run Water Co.,	1904	Zerbe Twp., Northumberland County	(*)	

Sec. No.	Water Company	Inc.	Incorporated for	Supplies	Character of supply
12	Rock Water Co., ----------	1905	Tremont Twp., Schuylkill County	(*)	----------
3 & 12	Glendower Water Co., ----	1905	Foster Twp., Schuylkill County	(*)	----------
12	Frailey Water Co., ------	1905	Frailey Twp., Schuylkill County	(*)	----------
3 & 12	Otto Water Co., ----------	1905	Reilly Twp., Schuylkill County	(*)	----------

*Companies chartered but not in operation

SOURCE AND COLLECTION

(1) Silver Creek; 210,000,000 gallon storage reservoir near headwaters in Broad Mountain, elevation overflow 1,508; watershed area 1.08 square miles. Spillway at northeastern end leads into Big Creek and adjoining watershed, which feeds separate system. Twelve-inch pipe to channel of Silver Creek, water flows 1 mile to small intake dam, elevation 1,250.

(2) Big Creek; small intake dam 2 miles below source, elevation 1,215; watershed area 2.0 square miles. Intake receives flow from Silver Creek reservoir and supplies separate system.

(3) Tumbling Run, tributary of Schuylkill River, two dams near mouth—capacity of lower 173,000,000 gallons, elevation 646.6; capacity of upper 224,400,000 gallons, elevation 697.5; watershed area above upper dam 6.0 square miles.

DISTRIBUTION

(1) By gravity through 10-inch main from Silver Creek intake southerly 1 mile, branching to 10-inch main westerly with 4-inch branch to Eagle Hill colliery. The 10-inch main divides into 12-inch and 8-inch continuing westerly to St. Clair; another branch 6-inch line down Silver Creek to New Philadelphia and 4-inch to Cumbola.

(2) A 12-inch gravity main from Big Creek intake 100 feet to connection with Moss Glen Water Co.'s line to Brockton (q. v.)

(3) Pumping station below lower Tumbling Run dam, at elevation 600, raises water through 12-inch main 15,200 feet northerly to St. Clair yards of Philadelphia & Reading Ry. Pump capacity 1,200 g. p. m. The 12-inch line continues north to St. Clair where it turns west and connects, above Minersville, with a main of Crystal Water Co.

Distributing mains are:

Size (inches),	16	12	10	8	6	4	Total
Length (miles),	0.6	6.8	1.5	2.9	5.0	1.9	18.7
Per cent.,	3	36	8	16	27	10	100

Pressures 50 to 270 pounds; 29 fire hydrants, 4-inch.

CONSUMPTION

Supply to 3,200 people; 350 taps, 5 metered industrial. Average daily consumption 1,296,000 gallons, 10% domestic and 90 per cent. industrial; measured by weirs and meters.

INDUSTRIAL

The Kaska William Colliery, leased by Dodson Coal Co., about 1 mile north of Middleport, is supplied by Silver Creek Water Co. through a pipe line owned by Schuylkill Water Co.

The Schuylkill Water Co. was incorporated in 1882; owned by Alliance Coal Co., subsidiary of Lehigh Coal & Navigation Co. Chartered territory defined as towns of Tuscarora and Patterson (now Brockton), and boroughs of Middleport and New Philadelphia, and vicinity in Schuylkill and Blythe townships.

NORRISTOWN AND BRIDGEPORT BOROUGHS, WEST NORRITON TWP., MONTGOMERY COUNTY

NORRISTOWN INSURANCE AND WATER COMPANY
THE BRIDGEPORT WATER COMPANY
WEST NORRITON WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Norristown,	27,875	5,610	34,000
Bridgeport,	3,860	763	4,200

LOCATION

Southern Montgomery County, on opposite sides of Schuylkill River; Norristown, county seat, on north bank, 18 miles north of Philadelphia; on Schuylkill Division of Pennsylvania R. R., Reading,

New York and Philadelphia Divisions of Philadelphia & Reading Ry., Perkiomen R. R., Stony Creek R. R., Philadelphia & Chester Valley R. R., Reading Transit line and Montgomery Traction line.

INDUSTRIES

Norristown, industrial center and residential suburb of Philadelphia; machine works, knitting and woolen mills, shirt factories, cigar factories, brewery, foundries and wire works, with total of 7,000 employes. Site of State hospital for the insane.

Bridgeport, residential suburb of Norristown; Diamond State Fibre Company.

WATER SUPPLY

Norristown Insurance and Water Co., incorporated 1847 for Norristown, owns and operates the Bridgeport Water Co., incorporated 1886, for Bridgeport Borough, and West Norriton Water Co., incorporated 1912 for West Norriton Township. State hospital for the insane has private system.

SOURCE AND COLLECTION

Schuylkill River; 16-inch and 24-inch intake pipes at foot of Barbadoes Street, Norristown, in deep channel on south side of Barbadoes Island; water by gravity to pump well. Raw water pumped to 1,300,000 gallon settling basin, from which it flows through mechanical filter having nine 500,000 gallon units, to 300,000 gallon clear water basin after application of hypochlorite of lime. It is then pumped through two 16-inch mains and one 24-inch main to distributing system. Pumping equipment two Worthington triplex pumps, capacity 5,000,000 gallons; one Worthington pump, 5,500,000 gallons; one Lawrence centrifugal pump, 4,000,000 gallons; one Lawrence centrifugal pump, 2,500,000 gallons; four water tube boilers, 100 hp. Water medium hard.

DISTRIBUTION

By pumping direct to distributing system with connection to 14,000,000 gallon equalizing reservoir just north of Norristown in Norriton Township. Pressures in pounds as follows:

Place	Average	Maximum	Minimum
Norristown borough,	65	90	40
Bridgeport borough,	52	75	28
West Norriton township,	24	30	17

Length of distributing mains in miles:

Size (inches)	Norristown	Bridgeport	West Norriton Twp.	Plymouth Twp.
2,	18.3	2.3	0.2	1.0
6,	10.6	1.5	0.4	
8,	3.3	1.0	0.4	
10,	0.2	0.2		
12,	2.5			
16,	1.8			
24.	2.0			
Total,	38.7	5.0	1.0	1.0

Fire hydrants: Norristown 174, Bridgeport 67, West Norriton township 4.

CONSUMPTION

	Norristown	Bridgeport	W. Norriton Twp.	Total
Population supplied,	32,250	4,000	138	36,388
No. of domestic taps,	6,653	820	42	7,512
No. of industrial taps,	359	80		439
Meters,	359	80	42	471
Total avg. daily cons., gallons,	2,500,000	450,000	5,300	2,955,300
Avg. daily indus. cons., gallons,	1,000,000	135,000	3,000	1,138,000

Figures for Norristown include 12 taps in Plymouth Township. Consumption measured by pump displacement and meters.

STATE INSANE HOSPITAL SYSTEM

Supply from six 8-inch drilled wells 385 to 500 feet deep, on property; reported yield 1,728,000 gallons daily. Two wells are near building and others 2,000 feet distant. Water pumped by air lift to 5,000,000 gallon reservoir, 80 feet above building. Average daily consumption 600,000 gallons to 3,000 inmates and employes.

NORTH WALES BOROUGH, MONTGOMERY COUNTY

THE NORTH WALES WATER COMPANY

Population 1910 census, 1,710; increase since 1900, 423. Estimated 1915, 2,000a

LOCATION

Eastern central Montgomery County, 9 miles northeast of Norristown; on Bethlehem Branch of Philadelphia & Reading Ry. and connected with Allentown by Lehigh Valley Traction line.

INDUSTRIES

Montgomery Mfg. Co., Asbestos Fiber Spinning Co., Armstrong truck works, North Wales Machine Co., and Acorn Web Co.; many residents employed in Philadelphia.

WATER SUPPLY

The North Wales Water Co., incorporated 1886 for North Wales Borough, leased the Upper Gwynedd and Lower Gwynedd Water Companies, incorporated 1900 and 1911 respectively, to legalize supply to those townships.

SOURCE AND COLLECTION

Four drilled wells; Nos. 1, 2, and 3 in central part, and No. 4 in northwestern part of borough.

Well No. 1, 10-inches diameter, 100 feet deep, reported capacity 40 gallons per minute, connected to Dyer-Cooper vertical steam pump; and well No. 2, 10-inches diameter, 120 feet deep, capacity 60 gallons per minute, connected to Platt steam pump; not used at present.

Well No. 3, 10-inches diameter, 157 feet deep, reported capacity 110 gallons per minute; water pumped, by Gould vertical pump, belt-connected to 10 hp. G. E. motor, through 6-inch force main 400 feet south to distributing system.

Well No. 4, 10-inches diameter, 350 feet deep, reported capacity 120 gallons per minute; water pumped, by 100 gallon Downie deep well pump, belt-connected to 10 hp. Fort Wayne electric motor, through 4-inch discharge a short distance to distributing system. Water hard.

DISTRIBUTION

By pumping direct to system with 8-inch connection to two storage tanks in highest part of borough. Capacity of one, 58,000 gallons; other, 125,000 gallons; pressures 20 to 80 pounds. Distributing mains:

Size (inches),	8	6	4	2 & smaller	Total
Length (miles),	0.6	0.5	4.9	1.3	7.3

Thirty fire hydrants, 4-inch.

CONSUMPTION

Supply to 2,500 people in borough and two adjoining townships; 515 taps, 40 industrial metered. Average daily consumption 90,000 gallons 80% domestic, 20% industrial to 15 factories; measured by pump displacement.

INDUSTRIAL SUPPLIES

Asbestos Fiber Spinning Co. has private system for industrial supply.

ORWIGSBURG BOROUGH, SCHUYLKILL COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,801; increase since 1900, 283. Estimated 1915, 1,950a

LOCATION

Southeastern Schuylkill County, on Silfis Run, 6 miles southeast of Pottsville; on Pottsville Branch of Lehigh Valley R. R. and Pottsville Union Traction line.

INDUSTRIES

Agriculture; three shoe factories, two knitting mills.

WATER SUPPLY

Municipal works built in 1885.

SOURCE AND COLLECTION

Silfis Run, tributary to Schuylkill River, 2.5 miles south of borough; two reservoirs 2 miles north of borough and 0.75 mile below source. Capacity of upper reservoir, 1,000,000 gallons; lower, 30,000,000 gallons; elevation about 200 feet above borough. Water soft.

DISTRIBUTION

By gravity through 12-inch main; reducing to 8-inch and 6-inch; pressures 80 to 90 pounds; 2 miles 8-inch, and 1 mile 6-inch distributing mains; 12 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,900 people; 600 taps. Average consumption 45,000 gallons daily, 75% domestic, 25% industrial. No means of measurement.

COST AND REVENUE

Total cost of works, $30,000; annual operating expenses, $2,000; gross annual revenue, $4,000.

PARKESBURG BOROUGH, CHESTER COUNTY

PARKESBURG WATER COMPANY

Population 1910 census, 2,522; increase since 1900, 734. Estimated 1915, 2,500a

LOCATION

Western Chester County, near headwaters of Buck Run, tributary of west branch of Brandywine Creek; on main line Pennsylvania R. R. and Conestoga Traction line.

INDUSTRIES

Tube mill and novelty works.

WATER SUPPLY

Parkesburg Water Co., incorporated 1889 for Parkesburg Borough.

SOURCE AND COLLECTION

(1) Drilled wells in borough; eleven 6-inch and 8-inch, 36 to 150 feet deep, at lower reservoir, capacity 110,000 gallons, and two 300 feet deep, at upper reservoir, capacity 1,238,000 gallons, about 1,200 feet north of lower reservoir.

Water pumped from lower reservoir through 6-inch force main, 300 feet long, connecting to 8-inch gravity main from upper reservoir. Pumping equipment a Smith-Vaile triplex pump connected to 20 hp. M. & W. oil engine, and a Deming triplex pump connected to 12 hp. M. & W. oil engine. Estimated minimum yield 50,000 gallons daily. Water soft.

(2) Sixteen springs 2 miles southwest of borough, at headwaters of Glen Run, tributary of Buck Run. About 1,680 feet of loosely laid terra cotta pipe, 3-inch to 8-inch, connect springs to 1,350 gallon basin, from which water flows through 6-inch main, 2.5 miles long to lower reservoir in borough. Estimated minimum flow 100,000 gallons daily. Water soft.

DISTRIBUTION

By pumping direct to system through 6-inch force main connecting with an 8-inch main, 1,300 feet long from upper reservoir acting as equalizer; pressures 30 to 70 pounds; about 7 miles distributing mains, 2-inch to 8-inch, over one-half 4-inch; 20 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,500 people; 450 taps, with 25 meters. Average daily consumption 125,000 gallons, 95% domestic, 5% industrial; measured by pump displacement.

INDUSTRIAL

Parkesburg Iron Co. has private supply.

PENNSBURG BOROUGH, MONTGOMERY COUNTY

PENNSBURG WATER COMPANY

Population 1910 census, 1,141; increase since 1900, 109. Estimated 1915, 1,350a

LOCATION

Extreme northern corner of Montgomery County, along Macoby Creek, tributary of Perkiomen Creek; on Perkiomen Branch of Philadelphia & Reading Ry.

INDUSTRIES

Three cigar factories, silk mill, shirt factory and planing mill.

WATER SUPPLY

Pennsburg Water Co., incorporated 1896 for Pennsburg Borough.

SOURCE AND COLLECTION

Hereford Creek, tributary of Perkiomen Creek; 500,000 gallon intake dam about 6 miles northwest of borough, in Berks County; watershed area 235 acres. Elevation of spillway crest 568 or 190 feet above borough. Water soft. When supply from this intake is insufficient to meet draft, thereby causing a drop in pressure, supply from Red Hill Water Co. flows into supply main by means of an automatically regulated pressure valve, about 4 miles northwest of borough, where 10-inch gravity main from Red Hill spring supply joins Pennsburg 8-inch main.

DISTRIBUTION

By gravity through 12-inch, reducing to 8-inch, main 6 miles long; pressures 66 to 97 pounds; 1.2 miles distributing mains, 4-inch to 8-inch; 35 fire hydrants, 4-inch.

CONSUMPTION

Supply to 2,000 people; 315 taps, some along supply main in Upper Hanover Township. Stated average daily consumption 75,000 gallons, 97% domestic, 3% industrial. No means of measurement.

PERKASIE BOROUGH, BUCKS COUNTY

PERKASIE WATER SUPPLY COMPANY

Population 1910 census, 2,779; increase since 1900, 976. Estimated 1915, 3,000a

LOCATION

Northwestern Bucks County, on northeast branch of Perkiomen Creek; 5 miles south of Quakertown; on Bethlehem Branch of Philadelphia & Reading Ry.

INDUSTRIES

Principally manufacture of cigars.

WATER SUPPLY

Perkasie Water Supply Co., incorporated 1902 for Perkasie Borough; purchased rights and franchise of Perkasie Water Co., incorporated 1895 for Perkasie Borough.

SOURCE AND COLLECTION

(1) Three springs rising in Rock Hill, about 2 miles north of borough, yield 150,000 gallons daily through 6-inch main, 8,000 feet long, under head of 12 feet, to 250,000 gallon storage reservoir. An 8-inch gravity main leads to 750,000 gallon distributing reservoir on hill 0.5 mile north of borough.

(2) Small tributary of Three Mile Run; auxiliary supply by pumping station 0.5 mile below storage reservoir. Pumping equipment 100,000 gallon pump and small gasoline engine. Water treated by mechanical filter and pumped through 8-inch main to distributing reservoir.

(3) Drilled well; water pumped to distributing reservoir.

DISTRIBUTION

By gravity through 8-inch main from reservoir; pressures 20 to 100 pounds; 62 fire hydrants, 4-inch.

CONSUMPTION

Supply to 2,700 people; 595 taps. Stated average daily consumption 150,000 gallons, 80% domestic, 20% industrial; measured by means of distributing reservoir.

PHILADELPHIA CITY, PHILADELPHIA COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,549,008; increase since 1900, 255,311.
Estimated 1915, 1,683,664x

LOCATION

Southeastern Pennsylvania, coextensive with Philadelphia County, on Delaware River, divided into two unequal sections by Schuylkill River. Covers an area of 129.5 square miles, ranking third among cities of United States in point of area and population. Transportation furnished by three railroad systems, coastwise and deep sea vessels.

INDUSTRIES

Ranks first among cities of United States in output of its textile industries, including manufacture of carpets and rugs, worsted cotton, woolen, cotton hosiery and knit goods; ship and locomotive building, manufacture of clothing, foundry and machine shop products, hats, hardware, leather goods, printing, publishing and dyestuffs.

WATER SUPPLY

Municipal works built in 1801, with source of supply from Schuylkill River. Additional source secured in 1851 from Delaware River. City divided into seven districts, in each of which a purveyor is in charge of operation and maintenance. Delaware and Schuylkill rivers furnish entire supply.

GENERAL OUTLINE OF SYSTEM

The Delaware River has drainage area of 12,012 square miles and the Schuylkill River 1,915 square miles.

There are several small dams of Schuylkill Navigation Co. on upper river, which, together with dam at old Fairmount Pumping Station and Flat Rock Dam, 7 miles above, form small pools which help to equalize daily flow.

Domestic and industrial supply taken from four different intakes; separate high pressure fire service system. Sources are as follows:

(1) Torresdale intake in Delaware River. Water pumped at low lift pumping station, filtered and repumped at single station to two

services connected to three large equalizing reservoirs, from one of which the third service is supplied by repumping. Nominal capacity of filter station, 200,000,000 gallons daily.

(2) Queen Lane intake in Schuylkill River. Water pumped to filter plant and reservoir, from which it supplies a service by gravity. Nominal capacity of filter station, 70,000,000 gallons daily.

(3) Roxborough intake in Schuylkill River. Water pumped to two settling basins at different elevations, filtered and distributed from clear water basins by gravity, part of it being repumped to a higher service. Nominal capacity of filter stations: Upper Roxborough, 20,000,000 gallons, and Lower Roxborough 12,000,000 gallons, daily.

(4) Belmont intake in Schuylkill River. Water pumped to settling basin, filtered and distributed from clear water basin and a reservoir by gravity into one service, part of it being repumped to a higher service. Nominal capacity of filter station 40,000,000 gallons daily.

TORRESDALE SUPPLY

SOURCE

Horeshoe shaped intake 700 feet long, in Delaware River, 11 miles northeast of center of city, above Pennypack Creek. Elevation of river at intake, minus 5.23 city datum (which is 5.23 feet above mean sea level and 2.25 above mean high water Delaware River).

PUMPING STATION

Eight centrifugal pumps, total capacity 330,000,000 gallons discharge into 11-foot main which leads to preliminary filters; equipment as follows:

	Capacity of each
Six R. D. Wood centrifugal, driven by compound vertical engines,	40,000,000 gals.
One Allis-Chalmers centrifugal, driven by compound vertical Bates engine,	40,000,000 gals.
One DeLaval centrifugal, driven by turbine engine,	50,000,000 gals.
Three generators driven by DeLaval turbine engine,	150 kw.
Two DeLaval centrifugal, driven by turbine engine for preliminary filter wash water,	5,000,000 gals.
One De Laval centrifugal turbine engine drievn for sand washing,	2,500,000 gals.
One Worthington compound duplex, emergency, used for sand washing,*	3,000,000 gals.
Nine Heine water tube boilers,	350 hp.

*To be replaced by two 2,000,000 gallon turbine driven centrifugals.

FILTER PLANT

North of pumping station, covering 200 acres; rated capacity 200,000,000 gallons per day. There are 120 preliminary beds arranged in batteries of 15, at elevation 34. Eleven-foot conduit from preliminary filters to final filters, which consist of 65 slow sand beds,

at elevation 17. From final filters a horseshoe shaped conduit leads to clear water basin and continues to Lardner's Point pumping station, along river, about 3 miles below. Conduit is 13,809 feet long and over 100 feet below ground surface; estimated carrying capacity 300,000,000 gallons.

LARDNER'S POINT PUMPING STATION

Consists of Stations No. 1 (the old Frankford pumping station), 2 and 3. Station No. 1 is generally held in reserve; station No. 2 discharges into three 48-inch lines, and No. 3 into 48-inch loop, each enlarges to a 60-inch main through the service districts. Equipment as follows:

	Capacity of each
No. 1 Station—	
One Cramp vertical duplex,	10,000,000 gals.
One Wetherill horizontal duplex,	10,000,000 gals.
One Southwark vertical duplex,	22,000,000 gals.
One Southwark horizontal duplex,	15,000,000 gals.
Four I. P. Morris Scotch marine boilers,	113 hp.
Eight Southwark Scotch marine boilers,	113 hp.
No. 2 Station—	
Six Holly vertical triplex,	20,000,000 gals.
Ten I. P. Morris horizontal tubular boilers,	110 hp.
Six Edge Moor Water tube boilers,	500 hp.
No. 3 Station—	
Six Holly vertical triplex,	20,000,000 gals.
Eight Edge Moor water tube boilers,	500 hp.

FRANKFORD HIGH SERVICE PUMPING STATION

At old Second and Comly streets, near Frankford reservoir. Pumps take suction through 20-inch branch from 48-inch force main in Torresdale service, under about 10 pounds pressure. Equipment as follows:

	Capacity of each
One Holly horizontal duplex,	3,000,000 gals.
One D'Auria horizontal duplex,*	4,000,000 gals.
Three I. P. Morris furnace-flue boilers,	100 hp.

*To be replaced by one 5,000,000 gallon and one 2,500,000 gallon turbine driven centrifugal.

Supplies Frankford High Service through Frankford standpipe.

RESERVOIRS

Name	Elevation high water	Capacity million gals.	Supplied from	Supplies
Torresdale clear water basin	7	50.0	Torresdale filters	Lardner's Point pumping station
Corinthian (distributing)	120	37.3	Lardners Pt. pumping Sta.	Torresdale service
East Park (distributing)	133	688.6	Lardners Pt. pumping Sta.	Torresdale service
Oak Lane (distributing) ----	210	70.0	Lardners Pt. pumping Sta.	Oak Lane service
Frankford (distributing)	167	36.9	Lardners Pt. pumping Sta.	Torresdale service and Frankford high service Pump. Sta.
Franford standpipe, --	300	0.106	Frankford high service pump Sta.	Frankford High service

DISTRIBUTION

Service in three districts, Torresdale and Oak Lane low services and Frankford high service.

Torresdale service supplies southeastern portion of city, an area 10 miles long, 2 miles wide, between Delaware and Schuylkill rivers, and along Delaware River; includes congested district, principal manufacturing district, with closely built residential section just north and south; elevations from tidewater to 75, with a few areas 125. Supply from two 60-inch mains from Lardner's Point pumping station, 3 miles long and branching into four 48-inch lines; East Park reservoir connected by two 48-inch mains.

Oak Lane service supplies densely built residential area southwest of center of city, elevations 50 to 105. Supply by 60-inch main from Lardner's Point pumping station, 3 miles long, reducing to 48-inch and from 30-inch main, 8 miles long, connected to Frankford reservoir.

Frankford high service supplies two suburban sections, one north and one south of Frankford reservoir, elevations 95 to 245. Supply to northern section by 20-inch main, 1.5 miles long, reducing to 16-inch; to southern section by 16-inch main 1.5 miles long, reducing to 12-inch.

Pressure, in pounds, as follows:

Service	Average	Maximum	Minimum
Torresdale, ----------	25	49	6
Oak Lane, ----------	24	48	7
Frankford high, ----------	57	85	33

QUEEN LANE SUPPLY

SOURCE

Two 8-foot conduit intakes in Schuylkill River at East Fairmount Park, 600 feet below mouth of Wissahickon Creek.

PUMPING STATION

Four units, capacity 80,000,000 gallons; suction through 48-inch pipe; discharges into two 48-inch force mains, 1.5 miles to Queen Lane Reservoir. Equipment as follows:—

	Capacity of each
Two Southwark vertical triplex,	20,000,000 gals.
Two Southwark vertical triplex,	20,000,000 gals.
Two generators,	35 kw.
Eight Badenhausen water tube boilers,	300 hp.

FILTER PLANT

Occupies north basin of Queen Lane Reservoir; capacity 70,000,000 gallons daily. The south basin, capacity 177,000,000 gallons, used as sedimentation basin. Filters consist of 40 preliminary beds at elevation 231, and 22 final beds with their floor forming roof of clear water basin, capacity 40,000,000 gallons, at elevation 216.

RESERVOIRS

Name	Elevation high water	Capacity million gals.	Supplied from	Supplies
Queen Lane sedimentation	238	177.5	Queen Lane pumping Sta.	Queen Lane filters
Queen Lane clear water basin	216	40.0	Queen Lane filters	Queen Lane service

DISTRIBUTION

Queen Lane service supplies closely built residential section, containing several groups of manufacturing plants, northwest of center of city, along Schuylkill River, elevation 55 to 140. Supply from four 48-inch mains from Queen Lane reservoir. Average pressure 31 pounds, maximum 60, and minimum 18.

ROXBOROUGH SUPPLY

SOURCE

Two masonry intakes in Schuylkill River at Shawmont Avenue, near city boundaries on northwest, 10 miles from center of city; elevation of river 31.7.

PUMPING STATION

Nine pumps, combined capacity 51,500,000 gallons per day, discharge through 20-inch and 30-inch force mains, each about 0.75 mile long, to Lower Roxborough Reservoir, and through 36-inch main about 1.5 miles to Upper Roxborough Reservoir. Equipment as follows:

	Capacity of each
One Worthington horizontal duplex,	5,000,000 gals.
One Worthington horizontal duplex,	6,500,000 gals.
One Gaskill horizontal duplex,	10,000,000 gals.
Four Worthington horizontal duplex,	5,000,000 gals.
Two Snow horizontal duplex,	5,000,000 gals.
Six I. P. Morris horizontal tubular boilers,	100 hp.
Two Wetherill horizontal tubular boilers,	100 hp.
Four Edge Moor water tube boilers,	500 hp.

LOWER ROXBOROUGH FILTER PLANT

Near Ridge and Shawmont avenues, adjacent to Lower Roxborough Reservoir. Water flows from storage reservoir through 11 preliminary filters, at elevation 350, and five slow sand beds at elevation 343 to 332, total capacity 12,000,000 gallons daily to covered clear water basin at elevation 326.

UPPER ROXBOROUGH FILTER PLANT

North of intersection of Port Royal and Hagey avenues, adjacent to Upper Roxborough Reservoir. Capacity of reservoir gives over nine days' sedimentation. Water pumped from reservoir by centrifugal pumps to eight slow sand filters, capacity 20,000,000 gallons daily, at elevation 417. Pumps are part of equipment of high service pumping station.

ROXBOROUGH HIGH SERVICE PUMPING STATION

Pumps which deliver to Roxborough standpipe take suction through 30-inch branch from 40-inch main, leading from Upper Roxborough clear water basin; those delivering to filter plant supplied by 36-inch

main from Upper Roxborough Reservoir under 41-feet head, and discharge through 30-inch line to filters. Equipment as follows:

	Capacity of each
One Worthington horizontal duplex,	5,000,000 gals.
Three Worthington 8-inch centrifugals direct connected to Buckeye vertical engine,	10,000,000 gals.
Four Edge Moor horizontal tubular boilers,	100 hp.
Two Southwark horizontal tubular boilers,	100 hp.

RESERVOIRS

Name	Elevation high water	Capacity million gals.	Supplied from	Supplies
Lower Roxborough	366	12.8	Roxborough Pump. Sta.	Lower Roxborough filters
Upper Roxborough sedimentation	414	147.0	Roxborough Pump. Sta.	Centrifugal pumps in Roxborough high service station, delivering to Upper Roxborough filters
Lower Roxborough, clear water basin	325.7	3.0	Lower Roxborough filters	Lower Roxborough service
Upper Roxborough, clear water basin	410	8.0	Upper Roxborough filters	Upper Roxborough service and Roxborough high service pumping station
Mt. Airy (distributing) (in reserve)	363	4.5	Upper Roxborough clear water basin	Mt. Airy pumping station, also Roxborough high or low service
Roxborough standpipe	491	.106	Roxborough high service Pump. Sta.	Roxborough high service

DISTRIBUTION

There are three services—Lower Roxborough intermediate service, Upper Roxborough high service, and Roxborough extra high service.

Lower Roxborough service supplies two areas; one area extending along east bank of Schuylkill River, 4 miles east of Lower Roxborough clear water basin, with a maximum width of 0.5 mile, including Manayunk, a residential section with a few mills, elevations 15 to 270; the other area including eastern part of Germantown, a closely built residential section near center of city, with some manufacturing plants, elevations 80 to 250.

First district supplied by 30-inch main, reducing to 20-inch, length 2 miles. Second district supplied through single 30-inch main, 5 miles long.

Upper Roxborough service for higher parts of Germantown and Manayunk and a small area north of center of city, closely built-up

residential section, elevations 190 to 350. Supplied by 48-inch main from Upper Roxborough clear water basin.

Roxborough high service for scattered residential section in northwestern part of city, including Chestnut Hill, Mt. Airy and higher sections of Germantown, elevations 200 to 445. Supplied by two 30-inch mains, 2.5 miles long from Roxborough High Service pumping station.

Pressures, in pounds, as follows:

Service	Average	Maximum	Minimum
Lower Roxborough,	53	145	12
Upper Roxborough,	49	100	25
Roxborough high,	56	82	23

BELMONT SUPPLY

SOURCE

Intake pipes, 72-inch and 36-inch, in Schuylkill River at West Fairmount Park, 5 miles below Roxborough pumping station; elevation of river 6.6.

PUMPING STATION

Six pumps, combined capacity 72,000,000 gallons, with suctions in pump wells beneath station, discharge through two 36-inch and one 48-inch force mains 1.6 long to Upper Belmont Reservoir. Equipment as follows:

	Capacity of each
One Worthington horizontal pump,*	12,000,000 gals.
Two Holly horizontal duplex pumps,	10,000,000 gals.
One Holly horizontal duplex pump,*	10,000,000 gals.
Two Bethlehem horizontal duplex pumps,	10,000,000 gals.
Three horizontal duplex Gaskill pumps,	10,000,000 gals.
Five I. P. Morris horizontal tubular boilers,	100 hp.
Seven I. P. Morris horizontal tubular boilers,**	100 hp.
Four I. P. Morris horizontal tubular boilers,	100 hp.
Ten Coatesville horizontal tubular boilers,**	100 hp.

*To be replaced by two 20,000,000 gallon DeLaval turbine centrifugal pumps.
**To be replaced by six 500 hp. Wickes boilers.

FILTER PLANT

At Ford Road and Belmont Avenue, just below Upper Belmont reservoir. Water flows through nine preliminary filters, capacity 40,000,000 gallons daily, at elevation 267, and 18 slow sand beds,

capacity 70,000,000 gallons daily, at elevations 254 to 248, to a clear water basin at elevation 239.

BELMONT HIGH SERVICE PUMPING STATION

In West Fairmount Park, between Belmont Avenue and George's Hill reservoir, from which it is supplied through 30-inch main under 20-feet head. Two pumps, combined capacity 11,000,000 gallons, raise water through 20-inch force main to Belmont standpipe. Equipment as follows.

	Capacity of each
One Worthington horizontal duplex,	5,000,000 gals.
One Allis-Chalmers horizontal duplex,	6,000,000 gals.
Four Edge Moor horizontal tubular boilers,	100 hp.

RESERVOIRS

Name	Elevation high water	Capacity million gals.	Supplied from	Supplies
Upper Belmont sedimentation	279	72.0	Belmont pumping station	Belmont filters
Belmont clear water basin	239	16.5	Belmont filters,	Belmont low service through George's Hill reservoir
George's Hill distributing	212	40.0	Belmont filters,	Belmont low service and Belmont high service pumping station
Belmont Standpipe,	364	0.016	Belmont High service pumping station	Belmont high service

DISTRIBUTION

Supplied through two services, Belmont low service, and Belmont high. The latter an intermediate service.

Belmont low service supplies all of city west of Schuylkill River, except a small portion, mainly a closely built residential section with several large manufacturing plants near river, elevations 5 to 130. Supply from two 48-inch mains from Upper Belmont clear water basin to George's Hill Reservoir, from which a 20-inch, 30-inch and 36-inch main, each over 3 miles long, extend into district.

Belmont high service supplies Overbrook and adjacent areas, a scattered residential section, elevations 75 to 220. Supply from a loop of 20-inch pipe about 4.5 miles long from Belmont standpipe.

Pressures, in pounds, as follows:

Service	Average	Maximum	Minimum
Belmont low,	30	49	15
Belmont high,	56	100	23

SEPARATE HIGH PRESSURE FIRE SYSTEM

(1) Old system: A 36-inch intake pipe, 200 feet long. in Delaware River at foot of Race Street.

(2) New system: Supply from Fairhill Reservoir at Lehigh Avenue and North Seventh Street.

Distribution divided into two systems by closed gate.

PUMPING STATION

Nine vertical triplex Deane pumps of aggregate capacity 9,100 gallons per minute, direct-connected to gas engines; suction through 36-inch intake and discharge into single 20-inch line.

Supplementary pumping station maintained as auxiliary to Fairhill Reservoir system. Eleven vertical triplex pumps, total capacity 12,350 gallons per minute, connected to gas engines, take supply through two 20-inch lines from Fairhill Reservoir; discharge into two 20-inch lines. This station built in 1910.

RESERVOIRS

Fairhill Reservoir, capacity 5,000,000 gallons, at elevation 112, fed by 30-inch main from Torresdale supply and can be fed from 10-inch Oak Lane service main.

DISTRIBUTION

Old system protects greater part of congested district by a nearly complete gridiron of 8, 12, and 16-inch pipe fed by 20-inch main from Race Street pumping station. Pressure of 300 pounds can be maintained.

Fairhill system protects a district at higher elevation by a loop of 20-inch and 16-inch pipe with 8-inch and 12-inch laterals; connected to old system through 20-inch main on Broad Street.

HIGH PRESSURE PIPES

Size in inches		Length, feet	Size in inches		Length, feet
Nominal	Internal diameter		Nominal	Internal diameter	
8	7-1/4	60,000	16	14-3/8	30,000
12	10-11/16	55,000	20	17-13/16	40,000
			Total,		185,000

Old system serves an area of 0.66 square mile, the congested district. There are 269 hydrants with 8-inch barrel and 8-inch gated connection to main; area served by each, 83,000 square feet.

Fairhill system serves an area of about 6 square miles north of congested district and includes most of important plants in Kensington manufacturing district. There are 453 hydrants with 8-inch barrel and 8-inch gated connection to main.

PIPES AND VALVES IN DISTRIBUTION SYSTEM

Diameter (inches)	Length of pipe (miles)	Per cent. of total	Number of gate valves
3,	16.14	0.9	425
4,	29.29	1.7	964
6,	1,133.20	64.5	25,186
8,	101.12	5.7	1,844
10,	108.98	6.2	2,142
12,	115.01	6.6	1,700
16,	38.18	2.2	337
18,	3.04	0.3	26
20,	54.07	3.1	271
22,	0.21		
24,	4.42	0.2	11
30,	56.26	3.2	175
36,	20.11	1.2	113
42,	.11		
48,	65.25	3.7	162
60,	8.29	0.5	
Total,	1,753.68	100.0	33,359

There are 16,288 fire hydrants, all with 6-inch connection to main.

CONSUMPTION

Maximum and minimum rates vary less than 10% from average. There are only 16,000 meters on a total of 360,000 service connections, and most of these were installed during 1914 and latter part of 1913.

Average daily consumption for past 8 years as follows:

Year ending Dec. 31	Average daily consumption (gallons)	Estimated population	Gallons per capita
1906,	319,814,000	1,447,000	221
1907,	302,437,000	1,472,500	205
1908,	322,044,000	1,498,000	215
1909,	306,017,000	1,523,500	201
1910,	314,000,000	1,549,008	203
1911,	317,930,000	1,577,200	202
1912,	319,948,000	1,606,000	199
1913,	287,671,000	1,611,000	179

COST AND REVENUE

Total cost of works, $165,000,000, exclusive of high pressure fire system, which is $2,150,000. Bonds outstanding, $30,000,000. Annual operating expenses, $2,448,000, including high pressure fire system.

PHILADELPHIA CITY (35TH AND 41ST WARDS), PHILADELPHIA COUNTY

PHILADELPHIA AND BRISTOL WATER COMPANY
(M. P. Quinn and others)

Estimated 1915 population, 27,000a, (included in Philadelphia)

LOCATION

Thirty-fifth and Forty-first wards of Philadelphia, northeast of center of city, along Pennypack Creek and Delaware River, known locally as Holmesburg, Tacony and Wissanoming. Range in elevation 10 to 102.

WATER SUPPLY

Philadelphia and Bristol Water Co., incorporated 1904 for Ben Salem Township, Bucks County. This company purchased stock of the Philadelphia Water Improvement Co., a New Jersey corporation, which had leased the following charters:

Name	Inc.	Incorporated for
Holmesburg Water Co.,,	1887	Oxford and Lower Dublin townships, Philadelphia County
Disston Water Co.,	1887	Tacony and vicinity, Philadelphia County

Philadelphia and Bristol Water Co. owns two other charters in Bucks County, but is not operating in that county.

SOURCE AND COLLECTION

Pennypack Creek and its tributary, Sandy Run; 24-inch intake in creek and 12-inch intake in run, 1.25 miles northwest of Holmesburg. The 24-inch line is 1,138 feet long to subsidence reservoir near mouth of Sandy Run, into which pipe from the run also discharges, capacity 500,000 gallons. Watershed area of creek 52 square miles; of run, 3 square miles. Water treated with sulphate of alumina before entering reservoir; flows by gravity to pump well nearby, 16 feet diameter, 20 feet deep, thence forced through pressure filters and 10-inch and 12-inch mains, each 3,240 feet long, to standpipe 14 feet diameter, 100 feet high, just west of Holmesburg. Water soft.

Pumping equipment 5,000,000 gallon Snow, 1,000,000 gallon Holly, 4,000,000 gallon Jeanesville and 500,000 gallon Worthington pumps. Pressure at pumps 67 pounds.

There are 10 pressure filters, 4 of New York Continental Jewell type, 2 of Roberts, and 4 of Simplex Valve and Meter Co.

DISTRIBUTION

By gravity through 10-inch and 12-inch mains, each 800 feet long, to distributing system. Territory supplied about 3 miles long and 1 mile wide; pressures 60 to 70 pounds. Distributing mains as follows:

Size (inches),	12	10	8	6	4	3 & smaller	Total
Length (miles),	0.6	4.9	2.4	15.0	8.0	1.0	31.9
Per cent.,	2	15	8	47	25	3	100

One hundred ninety fire hydrants; 88% 6-inch, remainder, 4-inch.

CONSUMPTION

Supply to 26,500 persons; 2,995 taps. Average daily consumption 1,820,000 gallons, 80% domestic and 20% industrial, measured by weir; 25 meters, 15 are industrial. Metered consumption 363,830 gallons daily industrial and 26,000 gallons domestic.

PHILADELPHIA CITY (OVERBROOK), PHILADELPHIA COUNTY

OVERBROOK STEAM HEAT COMPANY

Estimated 1915 population, 2,000 (included in Philadelphia)

LOCATION

Small residential section in western part of Philadelphia, area about 0.5 square mile.

WATER SUPPLY

Overbrook Steam Heat Co. has pumping plant at heating station; boilers 2,050 hp.

SOURCE AND COLLECTION

Four artesian wells; water pumped by 1,000,000 gallon Snow duplex pump. Water medium hard. Emergency supply from Springfield Consolidated Water Co. through 4-inch connection.

DISTRIBUTION

By pumping direct to system through 6-inch main with connection to 150,000 gallon standpipe; pressures 23 to 47 pounds; 4.6 miles distributing mains, 6-inch; 45 fire hydrants.

CONSUMPTION

Supply to 2,000 persons; 400 taps. Average daily consumption 128,000 gallons, all metered, domestic.

SUBURBS OF PHILADELPHIA, CHESTER, MONTGOMERY AND DELAWARE COUNTIES

SPRINGFIELD CONSOLIDATED WATER COMPANY
(American Pipe and Construction Co.)

Estimated population, 1910 census, 116,459; increase since 1900, 31,744; estimated 1915, 131,250a

LOCATION

Montgomery, Delaware and Chester counties, including greater part of built-up suburban residential district north and west of Philadelphia from eastern Montgomery County line as far west as Glen Loch, 25 miles west of Philadelphia; on Pennsylvania R. R., Philadelphia & Reading Ry. and several interurban electric lines from Philadelphia.

WATER SUPPLY

Springfield Consolidated Water Co., incorporated 1905 as Rydal Water Co. for Abington Township, Montgomery Cunty, named changed 1908. Owned and operated by American Pipe and Construction Co. This system, controlling 32 chartered companies, is next to Spring Brook and Scranton systems, being the third largest in the State.

Following places are supplied:

County	Township	Place	Charter.
Montgomery,	Abington,	Abington,	
Montgomery,	Abington,	Crestmont,	
Montgomery,	Abington,	Meadow Brook,	(Springfield Consolidated Water Co.)
Montgomery,	Abington,	Rockledge Boro.,	(Springfield Consolidated Water Co.)
Montgomery,	Abington,	McKinley,	Peoples Water Co. of Abington Twp.)
Montgomery,	Abington,	Rydal,	
Montgomery,	Abington,	Weldon,	(Glenside Water Co., Weldon)
Montgomery,	Abington,	Roslyn,	
Montgomery,	Abington,	Remlu Heights,	(Rockledge Water Co.)
Montgomery,	Abington,	Roslyn Terrace,	
Montgomery,	Abington,	Ardsley,	
Montgomery,	Cheltenham,	Edge Hill,	
Montgomery,	Cheltenham,	Laverock,	
Montgomery,	Cheltenham,	Hill Crest,	
Montgomery,	Cheltenham,	Glenside,	
Montgomery,	Cheltenham,	Wyncote,	
Montgomery,	Cheltenham,	Chelten Hills,	(Oak Lane Water Co.)
Montgomery,	Cheltenham,	Ogontz,	

Caunty	Township	Place	Charter.
Montgomery,	Cheltenham,	Elkins Park,	Glenside Water Co. (Edgehill & Glenside
Montgomery,	Cheltenham,	Melrose Park,	
Montgomery,	Cheltenham,	La Mott,	
Montgomery,	Cheltenham,	Oak Lane Terrace,	
Montgomery,	Cheltenham,	Ashbourne,	
Montgomery,	Cheltenham,	Lawndale,	
Montgomery,	Cheltenham,	Cheltenham,	
Montgomery,	Plymouth,	Ivy Rock,	Consumers Water Co. of Plymouth Twp.)
Montgomery,	Plymouth,	Conshohocken Boro.	
Montgomery,	Plymouth,	Harmanville,	(Conshohocken Gas & Water Co.)
Montgomery,	White Marsh,	Fort Hill,	
Montgomery,	White Marsh,	White Marsh,	
Montgomery,	White Marsh,	Valley Green,	
Montgomery,	White Marsh,	Plymouth Meeting,	
Montgomery,	White Marsh,	Cold Point,	(Citizens Water Co. of White Marsh Twp.)
Montgomery,	White Marsh,	Spring Hill,	
Montgomery,	White Marsh,	Lafayette,	
Montgomery,	White Marsh,	Barren Hill,	
Montgomery,	White Marsh,	Marble Hall,	
Montgomery,	Upper Merion,	Gulf Mills,	(Dewey Water Co.)
Montgomery,	Moreland,	Bethayres,	
Montgomery,	Moreland,	Willow Grove,	
Montgomery,	Moreland,	Huntingdon Valley,	
Montgomery,	Moreland,	Philmont,	(Moreland Water Co.)
Montgomery,	Moreland,	Bryn Athyn,	
Montgomery,	Moreland,	Fernwood,	
Montgomery,	Springfield,	Oreland,	
Montgomery,	Springfield,	Camp Hill,	
Montgomery,	Springfield,	Arlingham,	
Montgomery,	Springfield,	Flourtown,	
Montgomery,	Springfield,	Enfield,	(North Springfield Water Co.)
Montgomery,	Springfield,	Roslyn Heights,	
Montgomery,	Springfield,	Chestnut Hill,	
Montgomery,	Springfield,	Wyndmoor,	
Montgomery,	Springfield,	Ivy Hill,	
Montgomery,	Lower Merion,	Bala,	
Montgomery,	Lower Merion,	Cynwyd,	(Bryn Mawr Water Co.)
Montgomery,	Lower Merion,	Wynnewood,	
Montgomery,	Lower Merion,	Merion,	
Montgomery,	Lower Merion,	Narberth Boro.,	
Montgomery,	Lower Merion,	Ardmore,	
Montgomery,	Lower Merion,	Haverford,	
Montgomery,	Lower Merion,	Rosemont,	
Montgomery,	Lower Merion,	Bryn Mawr,	
Montgomery,	Lower Merion,	Pencoyd,	
Montgomery,	Lower Merion,	Academyville,	
Montgomery,	Lower Merion,	Barmouth,	
Montgomery,	Lower Merion,	Mt. Pleasant,	
Delaware,	Radnor,	Wayne,	
Delaware,	Radnor,	St. Davids,	
Delaware,	Radnor,	Ithan,	(Villa Nova Water Co.)
Delaware,	Radnor,	Villa Nova,	
Delaware,	Radnor,	Radnor,	(Wayne Water Works Co.)
Delaware,	Haverford,	Manoa,	
Delaware,	Haverford,	Llanerch,	
Delaware,	Haverford,	Grassland,	(Citizens Water Co. of Haverford Twp.)
Delaware,	Haverford,	Beechwood,	
Delaware,	Haverford,	Brookline,	(Peoples Water Co. of Delaware County)
Delaware,	Haverford,	South Ardmore,	
Delaware,	Haverford,	Penfield,	
Delaware,	Haverford,	Ardmore Park,	
Delaware,	Upper Darby,	Fernwood,	
Delaware,	Upper Darby,	Cardington,	
Delaware,	Upper Darby,	Garrettford,	
Delaware,	Upper Darby,	Lansdowne Boro.,	
Delaware,	Upper Darby,	Clifton Heights Boro.	
Delaware,	Upper Darby,	Millbourne Boro.,	
Delaware,	Upper Darby,	Aldan,	
Delaware,	Upper Darby,	East Lansdowne Boro.	
Delaware,	Upper Darby,	Hillsdale,	Consumers Water Co. of Upper Darby Twp.)
Delaware,	Upper Darby,	Burmont,	
Delaware,	Upper Darby,	Primos	(Clifton Heights Water Co.)
Delaware,	Upper Darby,	Kellevville,	
Delaware,	Upper Darby,	Secane,	(Lansdowne Water Co.)
Delaware,	Upper Darby,	Drexel Heights,	
Delaware,	Upper Darby,	Drexel Hill,	

County	Township	Place	Charter.
Delaware,	Upper Darby,	Highland Park,	
Delaware,	Upper Darby,	Observatory Hill,	
Delaware,	Upper Darby,	Kirklyn,	
Delaware,	Upper Darby,	Upper Darby,	
Delaware,	Upper Darby,	Adamsford,	
Delaware,	Darby,	Yeadon Boro.,	
Delaware,	Darby,	Darby Boro.,	Peoples Water Co. of Darby Twp.)
Delaware,	Darby,	Colwyn Boro.,	
Delaware,	Darby,	Academy,	Peoples Water Co. of Darby Twp.
Delaware,	Darby,	Sharon Hill Boro.,	
Delaware,	Darby,	Folcroft,	(Collingdale Water Co.)
Delaware,	Darby,	Llanwellyn,	
Delaware,	Darby,	Collingdale Boro.,	(Penn Water Co. Sharon Hill Boro.
Delaware,	Darby,	Glenolden Boro.,	
Delaware,	Ridley,	Holmes,	
Delaware,	Ridley,	Norwood Boro.,	(Highland Water Co. of Ridley Twp.)
Delaware,	Ridley,	Moore,	
Delaware,	Ridley,	Prospect Park Boro.	
Delaware,	Ridley,	Ridley Park Boro.,	(Eddystone Water Co.)
Delaware,	Ridley,	Crum Lynn,	
Delaware,	Ridley,	Eddystone,	(Ridley Park Cold Spring Water Co.)
Delaware,	Ridley,	Leiperville,	
Delaware,	Ridley,	Fairview,	
Delaware,	Ridley,	Woodlyn,	
Delaware,	Ridley,	Wilmont,	
Delaware,	Ridley,	Folsom,	
Delaware,	Ridley,	Rutledge Boro.,	
Delaware,	Ridley,	Faraday,	
Delaware,	Springfield,	Morton Boro.,	(Springfield Water Co.)
Delaware,	Springfield,	Swarthmore Boro.,	
Delaware,	Marple,	Broomall,	(Consumers Water Co. of Marple Twp.)
Delaware,	Marple,	Foxcroft,	
Delaware,	Tinicum,	Essington,	(Tinicum Water Co.)
Delaware,	Tinicum,	Lester,	
Chester,	Tredyffrin,	Strafford,	
Chester,	Tredyffrin,	Devon,	
Chester,	Tredyffrin,	Centreville,	(Tredyffrin Water Co.)
Chester,	Tredyffrin,	Paoli,	
Chester,	Tredyffrin,	Daylesford,	
Chester,	Upper Merion,	Valley Forge,	(Dewey Water Co.)
Chester,	Willistown,	Malvern,	
Chester,	Willistown,	Duffryn Mawr,	(Willistown Twp. Water Co.)
Chester,	Willistown,	Green Tree,	
Chester,	Schuylkill,	Moore Hall,	(Schuylkill Twp. Water Co.)
Chester,	Easttown,	Berwyn,	(Berwyn Water Co.)
Chester,	East Whiteland,	Frazer,	(East Whiteland Water Co.)
Chester,	East Whiteland,	Glen Loch,	
Montgomery,	Upper Dublin,		(Upper Dublin Water Co.)
Philadelphia,		Oak Lane,	

Territory supplied is divided into three districts, as follows:

(1) South of main line of Pennsylvania R. R., in Delaware County, with headquarters at Lansdowne, Delaware County.

(2) Along main line of Pennsylvania R. R. and west of Schuylkill River in Montgomery, Chester and Delaware counties, with offices at Bryn Mawr, Montgomery County.

(3) East of Schuylkill River, in Montgomery County, with offices at Oak Lane, Montgomery County.

SOURCE AND COLLECTION

Three sources of supply, furnishing water to the territory corresponding with above divisions.

(1) Crum Creek: intake 1 mile east of Media, Delaware County; 10,000,000 gallon storage reservoir; watershed area 28 square miles. Water treated with aluminum sulphate and passed into 10,000,000 gallon sedimentation basin, thence by gravity to suction wells and pumped into 10 mechanical pressure filters, total capacity 7,500,000 gallons daily. Water pumped to five distributing reservoirs, including Devon reservoir, listed under (2), as follows:

Distributing reservoirs	Capacity	Elevation	Supplies
Marple Hill,	2,000,000	321	Overbrook Reservoir and territory south of that served by Newtown Square Reservoir
Secane,	4,000,000	244	
Overbrook,	3,000,000	201	
Newtown Square,	4,000,000	492	East along West Chester Pike to Philadelphia line and part of Haverford township
Swarthmore standpipe,	206,000	245	Equalizer

The pumping plant is installed in four separate buildings. Station No. 1 is an old one, not ordinarily used, but maintained in working condition for emergencies. No. 2 is the main station, pumping to Marple Hill and Secane reservoirs for supply of low districts. No. 3 is the water power station used when water power is available. No. 4 is used for pumping to Newton Square reservoir for supplying high service.

The equipment in the buildings or stations is as follows:

Number and type	Capacity, each gallons
Station No. 1—	
Two Gould triplex pumps,	1,000,000
One Barr duplex pump,	2,000,000
Two pressure filters,	
Station No. 2—	
One Wetherill compound condensing pump,	2,600,000
One Wetherill compound condensing pump,	5,500,000
Eight pressure filters,	
Station No. 3—	
One Deane triplex pump—connected to water turbine,	360,000
One Deane triplex pump—connected to water turbine,	200,000
Two water turbines, 12 and 15 hp.,	
Station No. 4—	
One Snow pump,	2,500,000

(2) Pickering Creek; intake a short distance above mouth of creek, in Schuylkill River below Phoenixville, Chester County. Aver-

age flow 300,000 gallons daily per square mile, with a minimum of 100,000 gallons; watershed area 38 square miles.

An 8,000,000 gallon storage reservoir 0.5 mile above mouth of creek, with pumping station, settling basin and filter plant just below and near mouth of creek.

Water first pumped to 10,000,000 gallon sedimentation basin at elevation 84, across creek from station and thence through eight mechanical filters, capacity 4,000,000 gallons, and one 1,500,000 gallon slow sand filter to a 1,000,000 gallon clear water basin. Two high duty pumps then lift water to six distributing reservoirs, including Overbrook, listed under (1), and two standpipes, as follows:

Distributing reservoirs	Capacity	Elevation	Supplies
Diamond Rock,	1,000,000	622	West of Devon and high points east of Devon to Westmont
Valley Forge,	2,000,000	585	Devon reservoir
Devon,	4,000,000	549	East to Schuylkill River and south to Philadelphia line; can supply territory east of Schuylkill River if necessary
Wayne,	1,500,000	485	Supplied from Devon
Green Tree,	44,000	550	(Equalizer)
Bryn Mawr Standpipe,	500,000	531	Supplied from Devon
Ardmore Standpipe,	500,000	407	Supplied from Overbrook by pumping station

Pumping equipment as follows:

Pickering Creek—Number and type	Capacity, each, gallons
One plunger pump,	2,000,000
One plunger pump,	2,500,000
Two Gould triplex pumps,	250,000
One DeLaval turbine centrifugal pump,	4,750,000
One Worthington centrifugal pump,	5,000,000
Overbrook re-pumping—	
One Deane triplex boiler feed pump,	
One Corliss air pump,	
One Worthington duplex pump,	500,000
One Fairbanks-Morse duplex pump,	

(3) Intake on Neshaminy Creek, 8 miles above its mouth in Delaware River and just above tracks of New York Division of Philadelphia & Reading Ry. and Neshaminy Falls Station, Middletown Township, Bucks County; watershed area 214 square miles, highly cultivated and with little woodland.

Water flows by gravity from intake through 24-inch pipe to sedimentation basin at elevation 39 and 1,000 feet below where water is treated with coagulant; 24-inch discharge pipe to pump wells.

Filter plant four units pressure type, capacity of each 500,000 gallons daily. Water forced through them and 30-inch main into two Hillside standpipes, total capacity 1,876,000 gallons, 135 feet high, 35 feet diameter, at elevation 535, at Hillside in Abington Township, 65,000 feet to station, and to following standpipes:

	Capacity	Elevation of top
Oak Lane,	397,000 gallons	315
Chestnut Hill,	1,200,000 gallons	505
Conshohocken,	432,000 gallons	306

DISTRIBUTIÓN

Distribution system so arranged that any district may receive a supply from either of the other districts in emergency. Distributing mains as follows:

Size (inches),	20	16	14	12	10	8	6	4	under 4	Total
Length (miles),	12.3	45.3	8.3	29.0	23.8	75.1	214.0	104.0	19.0	530.8
Per cent.,	2	9	2	5	4	14	40	20	4	100

One thousand three hundred thirty-three fire hydrants, majority of which are 5¾-inch.

CONSUMPTION

Supply to 21,987 taps, 15,362 metered in 19 boroughs and 122 villages in 24 townships, together with Oak Lane and a few houses in Overbrook, Philadelphia County.

Average daily amount of water pumped during 1913 as follows:

District	Source	Average daily pumpage
No. 1,	Crum Creek,	3,820,000 gals.
No. 2,	Pickering Creek,	2,480,000 gals.
No. 3,	Neshaminy Creek,	1,760,000 gals.
	Total,	8,060,000 gals.

Maximum daily consumption 11,000,000 gallons, about 33% industrial.

HISTORY

The Springfield Consolidated Water Co., incorporated in 1905 as Rydal Water Co. for Abington Township, Montgomery County, and

name changed in 1908; owned by American Pipe and Construction Company.

In 1908, Springfield Consolidated Water Co. leased for a period of 99 years the following companies:

No.	Company	Inc.	For	County
1.	Springfield W. Co.,	1886	Springfield Twp.,	Delaware
2.	N. Springfield W. Co.,	1898	Springfield Twp.,	Montgomery
3.	Conshohocken Gas & W. Co.,	1871	Conshohocken Boro.,	Montgomery
4.	Eddystone W. Co.,	1892	Eddystone Boro.,	Delaware

(1) The Springfield Water Co. purchased the property and franchises of the following companies:

Company	Inc.	For	County	Purchased
Bryn Mawr W. Co.,	1892	L. Merion Twp.,	Montgomery,	1896
Citizens W. Co., of Darby Boro.,	1892	Darby Boro.,	Delaware,	1892
Citizens W. Co. of Haver. Twp.,	1901	Haverford Twp.,	Delaware,	1901
Clifton Hts. W. Co.,	1886	Clifton Hts. Boro.,	Delaware,	1896
Collingdale W. Co.,	1892	Collingdale Boro.,	Delaware,	1900
Consumers W. Co. of Marple Twp.,	1901	Marple Twp.,	Delaware,	1901
Highland W. Co. of Ridley Twp.,	1892	Ridley Twp.,	Delaware,	1892
Consumers W. Co. of Upper Darby Twp.	1892	Uper Darby Twp.,	Delaware,	1892
Lansdowne W. Co.,	1890	Lansdowne,	Delaware,	1899
Penn W. Co. Sharon Hill Boro.,	1892	Sharon Hill Boro.,	Delaware,	1892
Peoples W. Co. of Darby Twp.,	1892	Darby Twp.,	Delaware,	1892
Peoples W. Co. of Delaware Co.,	1901	Haverford Twp.,	Delaware,	1901
Ridley Park Cold Spring W. Co.,	1889	Ridley Park Boro.,	Delaware,	1892
Tinicum W. Co.,	1892	Tinicum Twp.,	Delaware,	1892

(2) The North Springfield Water Co. purchased the property and franchises of following companies:

Company	Inc.	For	County	Purchased
Berwyn W. Co.,	1895	Easttown Twp.,	Chester,	1899
Citizens W. Co. of White Marsh Twp.	1898	White Marsh Twp.,	Montgomery,	1898
Consumers W. Co. of Plymouth Twp.	1898	Plymouth Twp.,	Montgomery,	1898
Dewey W. Co.,	1898	U. Merion Twp.,	Montgomery,	1898
Glenside W. Co.,	1898	Glenside, Edgehill and Weldon,	Montgomery,	1899
Moreland W. Co.,	1898	Moreland Twp.,	Montgomery,	1898
Oak Lane W. Co.,	1893	Cheltenham Twp.,	Montgomery,	1899
Peoples W. Co. of Abington Twp.,	1898	Abington Twp.,	Montgomery,	1898
Upper Dublin W. Co.,	1898	Upper Dublin Twp.,	Montgomery,	1898
Wayne W. Wks. Co.,	1891	Radnor Twp.,	Part of Delaware,	1904

The Berwyn Water Co. purchased property and franchises of following companies:

Company	Inc.	For	County	Purchased
E. Whiteland W. Co.,	1895	E. Whiteland Twp.,	Chester,	1895
Schuylkill Twp. W. Co.,	1898	Schuylkill Twp.,	Chester,	1898
Tredyffryn W. Co.,	1895	Treddyffrin Twp.,	Chester,	1895
Villa Nova W. Co.,	1895	Radnor Twp.,	Delaware,	1895
Willistown W. Co.,	1895	Willistown Twp.,	Chester,	1895

Springfield Consolidated Water Co. owns stock of Rockledge Water Co., incorporated 1909 to legalize supply in Rockledge Borough.

PHOENIXVILLE BOROUGH, CHESTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 10,743; increase since 1900, 1,547. Estimated 1915, 12,000a

LOCATION

Northeastern-Chester County, on south bank of Schuylkill River, 28 miles from Philadelphia; on Schuylkill Division of Pennsylvania R. R., Reading Division of Philadelphia & Reading Ry., Pickering Valley R. R. and Montgomery and Chester Electric Ry. Range in elevations 160 feet.

INDUSTRIES

Iron and steel works of Phoenix Iron Co. employing about 3,000 men.

WATER SUPPLY

Municipal works built in 1872.

SOURCE AND COLLECTION

Schuylkill River: Two 24-inch intake pipes above borough to pumping station, elevation 90, containing 3,000,000 gallon Epping-Carpenter duplex duty pump, two 3,000,000 gallon Worthington pumps, one

2,000,000 gallon Worthington pump retained for emergencies, and two 150 hp. horizontal tubular boilers. Raw water from river treated with hypochlorite as it enters receiving sump, where low duty pump raises it to 500,000 gallon settling tank, from which it flows through mechanical filter of six 500,000 gallon units to 50,000 gallon clear water basin; then pumped through 12-inch force main to distributing reservoir at elevation 270 on the hill; divided into two parts, 3,000,000 and 6,000,000 gallons capacity respectively. Water soft.

DISTRIBUTION

By gravity through 18-inch main; pressures 20 to 80 pounds; 21 miles distributing mains, 18-inch to 4-inch; 191 fire hydrants, 12% 5/8 and 88% 4½-inch.

CONSUMPTION

Supply to 11,700 people; 2,000 taps. Average daily consumption 1,200,000 gallons, 80% domestic, 20% industrial; measured by pump displacement.

COST AND REVENUE

Total cost of works, $165,000; annual operating expenses, $16,000; gross revenue, $31,000.

PHOENIX IRON COMPANY SUPPLY

For industrial purposes, supply of water is obtained from a pumping station on Schuylkill River, just below that of borough; capacity of pump 2,500,000 gallons daily. Water for drinking purposes obtained from drilled well at plant; for fire protection from borough supply. Average daily consumption about 4,000,000 gallons.

POTTSTOWN BOROUGH, STOWE (WEST POTTSGROVE TWP.), SOUTH POTTSTOWN (NORTH COVENTRY TWP.), MONTGOMERY COUNTY

POTTSTOWN GAS & WATER COMPANY
WEST POTTSGROVE WATER CO. & NORTH COVENTRY WATER CO.

	Population 1910 census	Increase since 1900	Estimated 1915
Pottstown borough,	15,599	2,303	16,000a
Stowe village,			1,000a
South Pottstown,			600a
Total,			17,600

LOCATION

Extreme western Montgomery County, on Schuylkill River, 41 miles from Philadelphia; on Schuylkill Division of Pennsylvania R. R., Reading Division of Philadelphia & Reading Ry., Reading Transit Co. R. R. and Pottstown & Reading Ry.

INDUSTRIES

Pottstown iron and steel works, bridge and structural works, machine works, silk mill, shirt factories and knitting mills.

Stowe, silk mill and malleable iron works.

South Pottstown, ore recovering company.

WATER SUPPLY

Pottstown Gas & Water Co., incorporated 1869 for Pottstown; owns and operates The West Pottsgrove Water Co. for West Pottsgrove Twp. and North Coventry Water Co. for North Coventry Twp., both incorporated 1909 to legalize supply of Pottstown Gas & Water Co.

SOURCE AND COLLECTION

Schuylkill River; intake 2 miles west of borough, in West Pottsgrove Township; 30-inch pipe leads water by gravity to suction well in pumping station.

Two 5,000,000 gallon centrifugal pumps raise water to sedimentation basin, from which it passes through mechanical filter having six 666,666 gallon units, to a 100,000 gallon clear water basin. Water then pumped through 24-inch force main 1.5 miles long to 5,000,000 gallon distributing reservoir 163 feet above pumps in West Pottsgrove Township, northwest of and 2 miles from center of borough. Pumping equipment one Barr horizontal pump, capacity 3,000,000 gallons, and one 1,500,000 gallon Worthington pump. Water medium hard.

DISTRIBUTION

By gravity through 20-inch main to distributing system and 20-inch main connecting to 4,500,000 gallon distributing reservoir near center of borough, 163 feet above pumping station; pressures 30 to 70 pounds. Distributing mains as follows:—

Size (inches),	20	14	12	10	8	6	4	Total
Length (miles),	4.0	0.1	1.9	2.5	1.5	12.3	10.7	33.0
Per cent.,	13	----------	6	8	4	37	32	100

There are 125 fire hydrants 75% 6-inch and 25% 4-inch.

CONSUMPTION

	Pottstown	South Pottstown	Stowe	Total
Population supplied,	16,000	400	600	17,000
Number of taps,	----------	----------	----------	3,500
Meters,	108	35	7	150
Total average daily consumption,	1,547,000	3,000	50,000	1,600,000
Average daily industrial consumption,	----------	----------	----------	1,000,000

Consumption measured by pump displacement. Supplies to following industries: Leiboritz shirt factory, Manatawny knitting mills, Myerholf shirt factory.

Following companies supplied as stated:

Company	Source of supply
Champion Silk Co.,	Water company and drilled well
Ellis Keystone Agricultural Works,	Water company and drilled well
McClintock-Marshall Const. Co.,	Water company and drilled well
S. G. Flag & Co., Iron Fdry.,	Water company and drilled wells
Warwick Iron & Steel Co.,	Water company, Manatawny Creek and Schuylkill River
Glasgow Iron Co.,	Water company, drilled well, Manatawny Creek and Schuylkill River
G. B. Lessig Co.,	Schuylkill River
Pottstown Machine Co.,	Three drilled wells
Schuylkill Bridge Works,	Drilled wells
Sotter Bros.,	Drilled wells

POTTSVILLE CITY, ST. CLAIR, PORT CARBON, PALO ALTO AND MT. CARBON BOROUGHS, SCHUYLKILL COUNTY

THE POTTSVILLE WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Pottsville,	20,236	4,526	22,000a
St. Clair,	6,455	1,817	7,000a
Port Carbon,	2,678	510	3,000a
Palo Alto,	1,873	166	2,000a
Mt. Carbon,	335	83	400a

LOCATION

Southern Schuylkill County, along Schuylkill River, just north of Sharp Mountain and in heart of southern anthracite fields; on Pennsylvania R. R. and Philadelphia and Reading Ry. Range of elevations in district supplied 600 to 960.

INDUSTRIES

Principal industry, coal mining. Pottsville, large steel plant, iron foundries, furniture factories, shoe factories, knitting and cotton mills and several smaller plants. Port Carbon, principal residental district, one or two textile mills. Other boroughs, purely mining.

WATER SUPPLY

The Pottsville Water Co., incorporated 1834 for Pottsville, with supplement in 1854, when new source was secured.

SOURCE AND COLLECTION

(1) Kauffman Run; 100,000,000 gallon storage reservoir 6 miles northwest of Pottsville. All water soft.

(2) Eisenhuth Run; 300,000,000 gallon storage reservoir 7 miles north of Pottsville.

(3) Wolf Creek; 400,000,000 gallon upper reservoir, elevation 1,416, and 1 mile below a 1,000,000 gallon intake reservoir, elevation 1,146; 4 miles north of Pottsville.

(4) Four tributaries of Mill Creek; intakes on Tar, Shingle Hollow and Wildcat runs and Stony Creek.

(5) Indian Run; intake and pumping station, 3 miles southwest of Pottsville used as auxiliary supply. Water pumped directly into distributing mains; pumping equipment 1,500,000 gallon Jeanesville duplex pump and two 150 hp. Babcock & Wilcox boilers.

DISTRIBUTION

By gravity except Indian Run auxiliary supply, which has a 14-inch force main, through 2 miles 20-inch, 6 miles 16-inch and 8 miles 12-inch mains from storage reservoir on Mill Creek connecting to 5,000,000 gallon distributing reservoir in Pottsville. Pressures 10 to 190 pounds. About 60 miles distributing mains, 3-inch to 12-inch. 75% 6-inch. Fire hydrants owned by city and boroughs.

CONSUMPTION

Supply to 34,400 people, 6,500 taps. Stated average daily consumption 5,000,000 gallons; measured by depletion of storage in reservoirs.

Many mines in this district have their own supply, but in dry weather purchase water from The Pottsville Water Co.

READING CITY, BERKS COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 96,071; increase since 1900, 17,110.
Estimated 1915, 105,094x

LOCATION

Central Berks County, on east bank of Schuylkill River, 54 miles east of Harrisburg and 60 miles northwest of Philadelphia; on Philadelphia & Reading and Pennsylvania railroads, leading into anthracite district.

City territory extends about 3.5 miles along river and is about 2 miles wide. Occupies sloping ground flanked on east and south by Mt. Penn and Neversink Mountain; summits 900 and 500 feet, respectively, above river bank. Two hills in northerly section. Between these mountains and hills is most of built-up portion of city.

INDUSTRIES

Rapidly growing city, ranking fourth in population in State. Many and varied industries, and surrounded by prosperous agricultural country. Steel and iron mills, car shops, foundry and machine works, hardware manufacture, Philadelphia & Reading Ry. shops and yards, large silk mills, dye works, paper mills, hat factories, woolen mills and numerous smaller plants. Large number of hotels and summer cottages on east and southeast side of city, connected by gravity railroad.

WATER SUPPLY

Municipal works built in 1819 by Reading Water Co., incorporated 1819; purchased by city 1865.

Supply from five distinct sources; three storage reservoirs, three distributing reservoirs, four slow sand filter plants and two pumping stations. Distribution is in three services, high, intermediate and low, on account of wide range in elevations.

SOURCE AND COLLECTION

Following table shows different sources and collection into storage and distributing reservoirs, each source being described in detail following table:

SOURCES, STORAGE AND DISTRIBUTING RESERVOIRS

Sources and reservoirs	Per cent. total supply	Drainage area Sq. miles	Elevation high water	Capacity million gals.	Remarks
1. Maiden Creek,	60	210			Filtered water pumped to intermediate service.
Glengerry Dam,			261	Small	
Lower intake,			251 (about)	Small	Raw water pumped at intervals to Bernhart.
2. Antietam Creek,	22				Estimated minimum flow 30,000,000 gallons, daily average, 60,000,000.
Antietam storage reservoir,		5.44	510	101.0	Water filtered and supplied to intermediate service by gravity.
3. Bernhart Creek,	15				Filtered water by gravity to low service.
Bernhart storage reservoir,		2.56	385	42.0	Supplemented by water pumped from Maiden Creek and also from the intermediate course mains
4. Egelman Creek and Springs and Egelman storage reservoir,	2	0.60	680	7.0	Filtered water by gravity to high service
5. Hampden Springs and Hampden drift, Hampden collecting and distributing reservoir	1		445	29.180	A small supply to intermediate service
Other reservoirs distributing—					
Buttonwood (distribution),			613	0.926	High service equalizer
Penn St. (South) (distribution),			346.5	3.097	Low service
Penn St. (North) (distribution),			346.5	2.55	Low service

HIGH SERVICE SUPPLY

EGELMAN CREEK AND SPRINGS

Egelman Storage Reservoir, 1.5 miles east of city in mountain valley, impounding run-off from springs and small watershed. A small settling basin above with by-pass around reservoir.

A 12-inch pipe, reducing to 10-inch, leads to two open slow sand filters just south of reservoir; capacity of each 250,000 gallons daily.

When storage reservoir is insufficient during dry times, a pumping station near Hampden Reservoir is used to supply high service from mains of intermediate system; equipment two 75-hp. gas producers and two 50-hp., Fairbanks-Morse producer gas engines, each direct-connected to a vertical triplex double-acting pump, rated capacity 750,000 gallons daily. This station has been operated only a few months since it was erected in 1911.

LOW SERVICE SUPPLY

BERNHART CREEK

Bernhart Reservoir 3.5 miles north of city on Bernhart Creek; small settling basin at eastern end. A 30-inch gravity main leads from reservoir to six slow sand covered filters; total capacity 3,000,000 gallons daily. Supply supplemented, as occasion requires, from intermediate service through reducing valve in pipe connection to distributing reservoir. When gravity supply is insufficient water is pumped from Maiden Creek into Bernhart Reservoir.

INTERMEDIATE SERVICE SUPPLY

ANTIETAM CREEK

Antietam reservoir, 3.5 miles northeast of city, impounds water of Antietam Creek. One-third mile of 24-inch and 2.33 miles of 20-inch pipe from reservoir to three open slow sand filters; capacity of each 1,750,000 gallons daily.

HAMPDEN SPRINGS AND DRIFT

Springs 400 feet south of Hampden Reservoir, on northeast border of city, discharge into reservoir by 4-inch pipe. The drift is a collecting tunnel some distance into Mt. Penn, yielding a small supply.

MAIDEN CREEK

Supply taken from creek at two points 6.25 miles and 8 miles north of city at elevations 240 and 257 respectively. Upper intake is above

Glengerry Dam; 7,700 feet of 60-inch reinforced concrete gravity conduit, capacity 30,000,000 gallons daily delivers water to filters, about 1,000 feet above pumping station and lower intake.

Filters consist of ten slow sand covered beds; total capacity 12,000,000 gallons daily. Filtered water flows by gravity through 930 feet of 36-inch pipe to receiving well at pumping station. Pumping equipment:

	Capacity, each
Four Sterling water tube boilers,	175 hp.
One Allis-Chalmers vertical pump,	15,000,000 gals.
One Worthington horizontal pump,	10,000,000 gals.
One Worthington horizontal pump,	5,000,000 gals.

Large pump discharges to intermediate service, large Worthington pumps raw water to Bernhart Reservoir and smaller pump held in reserve. Cast iron pipes extend from creek to pump wells. Pumps also connected to filtered water pump well.

DISTRIBUTION

High service for narrow residential strip along eastern border of city, elevations 360 to 550 feet. Supplied from one 10-inch main which branches into two 10-inch mains after entering city, with 12-inch to Buttonwood equalizing reservoir; average pressure 86 pounds, varying from 44 to 111 pounds.

Low service for one-third of city—many of principal factories and a portion or residential section; elevations 190 to 275 feet. A 10-inch pressure reducing valve connects low to intermediate service. A 16-inch supply main from Bernhart Reservoir enters city from north; 12 and 16-inch connections in city, with 20-inch lines to Penn Street reservoirs. Average pressure 48 pounds, varying from 31 to 68 pounds.

Intermediate service for nearly two-thirds of city—several large manufacturing plants and a large portion of residential section; elevations 240 to 390 feet. A 16-inch supply main from Antietam filters through city, connecting to 16-inch main from Hampden Reservoir. A 24-inch main from Hampden Reservoir, branching into a 20-inch through western district, connecting with 24-inch force main from Maiden Creek pumping station; and into a 16-inch main through eastern district. Average pressure 65 pounds, varying from 15 to 95 pounds.

DISTRIBUTING MAINS (OCT 1, 1913)

Diameter (inches)	Length (miles)	Per cent. of total	Number of gate valves
4,	9.25	9.3	85
6,	51.89	52.0	1,142
8,	2.79	2.8	54
10,	11.39	11.4	197
12,	6.43	6.4	112
16,	10.38	10.7	177
20,	3.93	3.9	48
24,	2.94	3.0	18
30,	.01	.0	1
36,	.53	.5	1
Total,	99.54	100.0	1,835

Does not include about 14 miles of force and supply mains outside city limits

There are 175 connections for private fire service and 130 private hydrants; 997 fire hydrants, nearly all 6-inch.

CONSUMPTION

Consumption from all sources measured by Venturi meters, the intermediate and low services being given together as one figure because of connections between the two. Maximum consumption 23,525,949 gallons reached August 19, 1913; 33% metered. The following table gives consumption for each year since 1909:

Year ending April 1	Average daily consumption (gals.)	Estimated population	Gallons per capita	Number of meters	Number of services
1909,	12,257,640	93,000	132	2,570	21,533
1910,	12,755,307	94,700	135	3,020	21,883
1911,	12,625,694	96,400	131	3,424	22,194
1912,	13,428,935	98,200	137	3,783	22,503
1913,	14,321,084	99,900	143	4,177	22,792
*1914,	15,559,508	101,600	153	4,447	22,968

*To October 1, 1913.

Philadelphia & Reading Ry. is largest consumer of water, using an average of 1,300,000 gallons per day in its shops and works. Pennsylvania R. R. uses 100,000 gallons per day, and American Iron & Steel Co. 150,000 gallons per day.

COST AND REVENUE

Total cost of works (to April 7, 1913), $4,098,184; annual operating expenses, $76,494.

RED HILL BOROUGH, MONTGOMERY COUNTY

RED HILL WATER COMPANY

Population 1910 census, 664. Estimated 1915, 700a

LOCATION

Northwestern corner Montgomery County, on ridge between Perkiomen Creek and its tributary, Macoby Creek; on Perkiomen R. R.

INDUSTRIES

Two cigar factories.

WATER SUPPLY

Red Hill Water Co., incorporated 1911 for Red Hill Borough.

SOURCE AND COLLECTION

Kemmerer Spring, in Upper Milford Township, Lehigh County, 8 miles northwest of Red Hill, on 71-acre tract, property of Red Hill Borough; estimated minimum flow exceeds 400,000 gallons daily. An 8-inch gravity main 300 feet long to 500,000 gallon storage and distributing reservoir, 175 feet above borough and 15 feet lower than Pennsburg Water Co.'s intake dam on a branch of Perkiomen Creek.

DISTRIBUTION

By gravity through 10-inch main 2 miles to junction with 8-inch gravity supply main of Pennsburg Water Co., about 1 mile south of intake dam.

An agreement with Pennsburg Water Co. permits Red Hill Water Co. to use 8-inch gravity line 5 miles long through Pennsburg to 6-inch gravity main of Red Hill Water Co., 1 mile long to distributing system in Red Hill. At junction of 10-inch and 8-inch mains above Pennsburg an automatically regulated pressure valve is set so that when supply from intake dam is drawn down the Red Hill Spring supply will flow into Pennsburg mains.

A 6-inch distributing main, 6,400 feet long with 4-inch laterals; 34 fire hydrants.

CONSUMPTION

Supply to 350 people; 79 taps. Stated consumption 15,000 gallons daily, all domestic. No means of measurement.

RICHLAND BOROUGH, LEBANON COUNTY

RICHLAND WATER COMPANY

Population 1910 census, 722. Estimated 1915 population, 800b

LOCATION

Southeastern Lebanon County, near Tulpehocken Creek, 10 miles east of Lebanon, on Lebanon Valley Branch of Philadelphia & Reading Ry.

INDUSTRIES

Cigar factory, knitting mill and cigar box factory.

WATER SUPPLY

Richland Water Co., of Richland, Pa., incorporated 1888 for Richland.

SOURCE AND COLLECTION

Thirty thousand gallon reservoir in mountain gap of South Mountain, receives flow from a spring and surface flow from 100 acres of land; 75 acres owned by company.

DISTRIBUTION

By gravity through 3-inch main; pressure about 160 pounds. An 84,000 gallon standpipe in borough used for storage during dry season.

CONSUMPTION

Supply to 700 people; 150 taps. No means of measuring consumption; but assuming 30 gallons per capita, would be 21,000 gallons daily, all domestic.

ROYERSFORD AND SPRING CITY BOROUGHS, CHESTER AND MONTGOMERY COUNTIES

HOME WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Royersford,	3,073	486	3,700a
Spring City,	2,880	314	3,300a

LOCATION

Spring City in northeastern Chester County, and Royersford in western Montgomery County, along opposite sides of Schuylkill River; on Schuylkill Division of Pennsylvania R. R., Reading Division of Philadelphia & Reading Ry., and Montgomery & Chester Electric Ry. Range of elevations 105 to 245.

INDUSTRIES

Knitting mills, stove foundries, fire brick works, spring bed factory, glass bottle works and planing mills.

WATER SUPPLY

Home Water Co., incorporated 1887 for Royerford Borough as Royersford Water Co., name changed to Home Water Co. after purchase of Spring City Water Co., incorporated 1887 as the Home Water Co. of Royersford for Spring City Borough.

Eastern Pennsylvania State Institution for the Feeble-Minded and Epileptic, 1.5 miles north of Spring City; private system installed in 1914.

SOURCE AND COLLECTION

Schuylkill River; intake, pumping station and filter plant in northwestern part of Royersford. A 12-inch intake pipe to pump well; water lifted to 50,000 gallon settling basin. Pumping equipment two 800,000 gallon Worthington pumps and two 60 hp. horizontal tubular boilers. Water by gravity through mechanical filters, two 500,000 gallon and one 400,000 gallon units, to 60,000 gallon clear water basin, thence pumped through 16-inch main 950 feet to distributing system.

DISTRIBUTION

By pumping direct to system with 16-inch connection 1.5 miles to 3,000,000 gallon equalizing reservoir north of Spring City; pressures 50 to 115 pounds. Distributing mains as follows:

Size (inches),	16	12	10	8	6	4	Total
Length (miles),	1.5	1.4	0.3	1.0	8.2	0.6	13.0
Per cent.,	11	11	2	8	63	5	100

Sixty-one fire hydrants, 6-inch.

CONSUMPTION

Supply to 6,000 persons through 800 taps; 106 metered, 24 industrial. Average daily consumption 372,000 gallons, 97% domestic, 3% industrial; measured by pump displacement allowing for slippage. Metered daily consumption 10,570 gallons industrial and 12,430 domestic.

The eastern Pennsylvania State Institution has private system, using 173,000 gallons daily from drilled wells.

Nearly all industries have private systems for industrial supply, with emergency connections to water company.

ST. LAWRENCE (EXETER TWP.), BERKS COUNTY

ST. LAWRENCE WATER COMPANY.

Estimated 1915 population, 300

LOCATION

Exeter Township, south central Berks County, on Antietam Creek, 3 miles east of Reading; post office, Esterly; on Reading and Boyertown trolley line.

INDUSTRIES

Agriculture; two woolen mills and a glue factory.

WATER SUPPLY

St. Lawrence Water Co., incorporated 1901 for St. Lawrence.

SOURCE AND COLLECTION

Spring on Guldin Hill, 0.5 mile northeast of village; estimated flow 32,000 gallons daily, decreasing during summer. Water soft.

DISTRIBUTION

By gravity through 4-inch main 730 feet long with connection to 130,000 gallon equalizing reservoir 600 feet south of spring; pressures 60 to 100 pounds; 1.3 miles distributing mains, 4-inch and 6-inch; 12 fire hydrants, 2½-inch.

CONSUMPTION

Supply to 300 people; 66 taps, 7 metered. Stated daily consumption 18,000 gallons, 90% domestic, 10% industrial metered. No means of measurement.

SCHUYLKILL HAVEN AND CRESSONA BOROUGH, SCHUYLKILL COUNTY

SCHUYLKILL HAVEN GAS AND WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Schuylkill Haven,	4,747	1,093	4,800
Cressona,	1,837	99	2,000

LOCATION

Central Schuylkill County, adjoining boroughs on east and west side of Schuylkill River at mouth of West Branch of Schuylkill River, 5 miles south of Pottsville; on Schuylkill Division of Philadelphia & Reading Ry., Pottsville Branch of Lehigh Valley R. R. and Pottsville Union Traction Co.

INDUSTRIES

Iron works, 13 knitting mills, 3 dye and bleach works, shoe factory and car shops of Philadelphia & Reading Ry.

WATER SUPPLY

Schuylkill Haven Gas & Water Co., incorporated 1855 for Schuylkill Haven; supplying since 1881. Controls Cressona Water Co., incorporated 1911 for Cressona Borough, and Wayne Water Co., incorporated 1911 for North Manheim Township.

SOURCE AND COLLECTION

Hummels and Berkelbach runs, small tributaries near headwaters of Little Swatara Creek in Second Mountain, 4 miles northwest of boroughs and in Section No. 12. Gravity mains from intake to 10,000,000 gallon reservoir on Panther Creek 0.75 mile below source, a tributary of West Branch Schuylkill River; watershed area 0.32 square mile. Watershed area above intake on Hummels Run 0.51 square mile; on Berkelbach Run 0.61 square mile. Water medium hard.

Reserve pumping station near reservoir for use during 6 weeks of dry summer season. Water pumped from two wells by air lift steam pump; two 40 hp. boilers.

DISTRIBUTION

By gravity through 8-inch main; pressures 65 to 120 pounds; 43 fire hydrants, 2½-inch.

CONSUMPTION

Supply to 6,500 persons; 1,375 taps. Average daily consumption 300,000 gallons, 75% domestic, 25% industrial; measured by 1,375 meters on taps.

Water from Payne's Dam at pumping station near mouth of Panther Creek, used to supply Philadelphia & Reading Ry. locomotives and yards.

SCHUYLKILL HAVEN COAL STORAGE YARD.

PINE HILL WATER COMPANY
NORTH MANHEIM WATER COMPANY

(Philadelphia & Reading Coal & Iron Company)
(Industrial Supply)

LOCATION

Southeastern Schuylkill County, 1.5 miles east of Schuylkill Haven, on Schuylkill River; on Philadelphia & Reading Ry.

WATER SUPPLY

North Manheim Water Co., incorporated 1904 for North Manheim Township, buys water from Pine Hill Water Co., incorporated 1904 for Landingville Borough; both owned by Philadelphia & Reading Coal & Iron Co. (see New Philadelphia).

SOURCE AND COLLECTION

Moshannon Creek; intake in Landingville Borough, 3 miles east of Schuylkill Haven; watershed area 6 square miles; pumping station at elevation 475; 1200 g. p. m. electric turbine pump.

DISTRIBUTION

By pumping through 12-inch force main 3,450 feet to North Manheim Township line, thence 1,460 feet to storage tank, elevation 565, at storage yard; pressure 40 pounds.

CONSUMPTION

Industrial supply. Average daily consumption 400,000 gallons; measured by pump displacement.

SELLERSVILLE BOROUGH, BUCKS COUNTY

MUNICIPAL WATER WORKS

Source of supply in Middle Delaware Sub-basin, Section No. 2 (q. v.).

SHERIDAN (MILL CREEK TWP.), LEBANON COUNTY

MILL CREEK WATER COMPANY

Estimated 1915 population, 260

LOCATION

Southeastern Lebanon County, on Mill Creek, a tributary of Tulpehocken Creek, along Philadelphia & Reading Ry., 11 miles east of Lebanon. Range in elevations in district served, about 20 feet.

INDUSTRIES

Manufacture of iron, cigar factory.

WATER SUPPLY

Mill Creek Water Co., incorporated 1907 for Mill Creek Township.

SOURCE AND COLLECTION

Through Womelsdorf Consolidated Water Co.'s main from reservoir on Gold Stream, about 2 miles southeast of Sheridan; pipe line of Wolmesdorf company is tapped short distance below intake and 6-inch main leads 1.25 miles to village. Water soft.

DISTRIBUTION

By gravity; pressure 75 to 80 pounds; 2 fire hydrants. All taps lead from trunk main passing through village.

CONSUMPTION

Supply to 225 persons; 48 taps. Stated average daily consumption 5,500 gallons, measured by meter.

SILVERTON, (BRANCH TWP.), SCHUYLKILL COUNTY

SHEAFER CREEK WATER COMPANY
(Delaware & Hudson Coal Co.)

Estimated 1915 population, 83a

LOCATION

Branch Township, West central Schuylkill County, at junction of Sheafer Creek with West Branch Schuylkill River; on Philadelphia & Reading Ry. and Lehigh Valley R. R.

INDUSTRIES

Colliery of Delaware & Hudson Coal Co.

WATER SUPPLY

Sheafer Creek Water Co., incorporated 1893 for Branch Township; owned by Delaware & Hudson Coal Co.

SOURCE AND COLLECTION

(1) Sheafer Creek; two small reservoirs 1 mile above mouth, west of and 20 feet above village; watershed area 1.16 square miles.

(2) Spring rising in Sharp Mountain, several hundred feet south of mouth of Sheafer Creek; flow impounded in small reservoir, 40 feet above houses.

DISTRIBUTION

By gravity from creek reservoirs through 4-inch terra cotta pipe ending in wooden trough, and from spring through 1½-inch line 700 feet long.

CONSUMPTION

Supply to 83 people; 9 taps. No means of measuring consumption; assuming 20 gallons per capita, would be 1,700 gallons daily, all domestic.

SINKING SPRING BOROUGH AND SPRINGMONT AND WEST LAWN (SPRING TWP.), BERKS COUNTY

SINKING SPRING WATER COMPANY

Estimated 1915 population, 1,500

LOCATION

Central western Berks County, 5 miles west of Reading; on Lebanon Valley Division of Philadelphia & Reading Ry. and Reading Transit Co. Springmont is 1.5 miles, and West Lawn 2.5 miles, east of borough.

INDUSTRIES

Suburban residential; agriculture; foundry, cigar box factory and creamery.

WATER SUPPLY

Sinking Spring Water Co., incorporated 1894 for Sinking Spring village, has leased Wyomissing Spring Water Co., incorporated 1902 for Spring Township and supplied eastern section of Wyomissing Borough, other half being supplied by West Reading Water Co. (See West Reading.)

SOURCE AND COLLECTION

(1) Gring Springs in mountain 1.25 miles southeast of borough; water piped 1,000 feet to 300,000 gallon reservoir. Reported minimum flow of spring 200,000 gallons daily from drainage area of 500 acres; flow uniform; water medium hard.

(2) Yost and Wyomissing springs; pumping station in Wyomissing receives flow through 6-inch pipe, 2,000 feet long from Yost Spring, and 6-inch pipe 800 feet long from Wyomissing Spring. Pumping equipment 240,000 gallon Deane triplex pump, 10 hp. turbine water wheel and auxiliary 15 hp. gasoline engine.

DISTRIBUTION

By gravity through 6-inch main from reservoir to Sinking Spring, thence to Springmont and Wyomissing by pumping from springs at Wyomissing; pressures 40 to 100 pounds; 9 miles distributing mains, 4-inch and 6-inch; 18 fire hydrants, 2½-inch.

CONSUMPTION

Supply to 1,000 persons, 35 being in Springmont, 45 in West Lawn and 150 in Wyomissing, through 250 taps. Stated average daily consumption 200,000 gallons, 90% domestic. No means of measurement. From 11 meters, daily consumption is 28,900 gallons industrial, 2,890 gallons domestic.

SOUDERTON BOROUGH, MONTGOMERY COUNTY

MUNICIPAL WATER WORKS.

Population 1910 census, 1,875; increase since 1900, 798. Estimated 1915, 2,000a

LOCATION

Northeastern Montgomery County, at headwaters of Skippack Creek, tributary of Perkiomen Creek; 30 miles from Philadelphia; on Bethlehem Branch, New York Division of Philadelphia & Reading Ry. and Lehigh Valley Transit line.

WATER SUPPLY

Municipal plant built in 1896.

SOURCE AND COLLECTION

Three drilled wells and spring with pumping station at each; two wells in borough and other 1,500 feet away.

Well	Diameter (inches)	Depth (feet)	Capacity (gals.. daily)
Well No. 1,	8	105	
Well No. 2,	8	500	50,000
Well No. 3,	8	216	140,000

Water from well No. 1 pumped by 2,000 gallon electrically driven pump; from Nos. 2 and 3, raised by air lift to new receiving basin at pump house and thence by 400,000 gallon pump directly into distributing system.

Water from spring in Hilltown Township east of borough forced by 400,000 gallon gasoline engine-driven pump through 8-inch force

main 1,000 feet long, joining drilled well force main near equalizing reservoir. Spring water soft; well water very hard.

DISTRIBUTION

By pumping direct to system with connection to 1,000,000 gallon equalizing reservoir 140 feet above borough; pressures 60 to 110 pounds; 4 miles of distributing mains, 4-inch to 8-inch; 35 fire hydrants.

CONSUMPTION

Supply to 2,000 people; 500 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 60,000 gallons daily, all domestic.

COST AND REVENUE

Total cost of works, $40,115; annual operating expenses, about, $2,700; gross revenue (1913), $5,313.

STATE INSANE ASYLUM FOR THE CHRONIC INSANE OF PENNSYLVANIA, BERKS COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 1,000a

LOCATION

Heidelberg Township, southwestern Berks County, on tributary of Spring Creek, 1 mile west of Wernersville.

WATER SUPPLY

Private water supply system built 1894, when new asylum was built.

SOURCE AND COLLECTION

Storage reservoir on each of two small spring runs uniting 1 mile southwest of asylum. Water flows through 6-inch pipes from each reservoir to 150,000 gallon settling basin at junction, from which it

flows through mechanical filter to 500,000 gallon clear water reservoir, elevation 130 feet above buildings. Water soft.

DISTRIBUTION

By gravity through 6-inch main 1 mile long; pressure about 48 pounds; 39 fire hydrants, $2\frac{5}{8}$-inch.

CONSUMPTION

Supply to 1,000 persons. Average daily consumption 500,000 gallons, all domestic, measured by Venturi meters.

TAMAQUA BOROUGH, SCHUYLKILL COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 9,462; increase since 1900, 2,195. Estimated 1915, 12,000

LOCATION

Eastern Schuylkill County, along Little Schuylkill River, at mouth of Panther Creek; on Reading & Shamokin Divisions of Philadelphia & Reading Ry., Tamaqua Branch of Central R. R. of New Jersey, and Eastern Pennsylvania Rys. Built-up portion on hills, elevations 800 to 1,002.

INDUSTRIES

Coal center; offices and shops of Philadelphia & Reading Ry., knitting mill, shirt factory, mining machinery manufacture, silk mill, screen works, two planing mills and brewery. Large number of residents are employed in Panther Creek valley mines.

WATER SUPPLY

Municipal works built in 1851.

SOURCE AND COLLECTION

(1) Owl Creek; 18,000,000 gallon reservoir, 2.5 miles below source and 2 miles southeast of borough; watershed area 2.9 square miles.

During dry seasons or about four to five months of each summer, water pumped from three wells by air lift into reservoir. Pumping station contains two gas producer plants, 50 and 125 hp. operating air compressor. Average yield of wells 600,000 gallons daily. Minimum flow of Owl Creek for thirty years record was 430,000 gallons per day, in August, 1912. New 10-inch 600 g. p. m., well, 300 feet deep.

One mile below dam is intake in Owl Creek. Water pumped into supply pipe from reservoir by 430,000 gallon Jeanesville duplex pump; 1.1 miles of 16-inch and 1.2 miles of 14-inch supply main. Water soft.

(2) Rabbit Run; 6,000,000 gallon reservoir, 1.5 miles above mouth; watershed area 1.6 square miles. One-half mile below dam is intake with pumping station, capacity 430,000 gallons daily. Water pumped through 4-inch main into 8-inch supply pipe from reservoir; 1.7 miles of 8-inch and 1.6 miles of 6-inch mains. Water soft.

DISTRIBUTION

By gravity through 16-inch main, reducing to 14-inch, from Owl Creek reservoir and 6 and 8-inch from Rabbit Run reservoir. Elevation of Owl Creek spillway crest 1,060, Rabbit Run spillway crest, 992.5, and intersection of Broad and Center streets in borough 800. Pressures 25 to 115 pounds; 94 fire hydrants, mostly 6-inch. Distributing mains as follows:

Size (inches),	12	10	8	6	4	2	Total
Length (miles),	0.1	1.0	1.1	4.0	6.3	0.2	12.7
Per cent.,	1	8	9	31	50	1	100

CONSUMPTION

Supply to 11,500 people; 1,950 taps. Average daily consumption 1,400,000 gallons, 72% domestic, 28% industrial, 70 meters; measurement by weirs and pump displacement.

Rabbit Run water used principally by Philadelphia & Reading Ry. Co.

COST AND REVENUE

Annual operating expenses $10,000; gross revenue (1913), $26,000.

TELFORD AND WEST TELFORD BOROUGHS AND NEIGHBORING VILLAGES, BUCKS AND MONTGOMERY COUNTIES

TELFORD WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Telford, Bucks County,	207	26	200
West Telford, Montgomery County,	664	130	700
Reliance, Franconia Township,			200
Maple, Hilltown Township,			100

LOCATION

West Telford, in northeastern Montgomery County, at headwaters of Indian Creek, tributary of Northeast Branch Perkiomen Creek; on Bethlehem Branch of Philadelphia & Reading Ry., Lehigh Valley Traction Co. and Montgomery County Rapid Transit line. Directly across county line, in Bucks County, is Telford; to southeast is Maple, and 1 mile south, in Franconia Township, is Reliance.

INDUSTRIES

Principally agriculture; cigar factory, shirt factory and planing mill.

WATER SUPPLY

Telford Water Co., incorporated 1911 as merger of following companies:

Name	Inc.	Incorporated for
Telford Water Co.,	1910	West Telford Borough
Reliance Water Co.,	1910	Franconia Township
Rockhill Water Co.,	1911	Telford Borough
Hilltown Water Co.,	1911	Hilltown Township

SOURCE AND COLLECTION

Ten-inch drilled well, 253 feet deep, in central part of West Telford Borough; yield 250,000 gallons per day; water pumped by 150

g. p. m. Gould deep well pump; 6-inch suction and 8-inch force main, directly into system.

DISTRIBUTION

By pumping direct to distributing system with connection to 62,000 gallon equalizing standpipe in Reliance, 100 feet above borough; 4.5 miles of mains, 4-inch to 8-inch; 29 fire hydrants, 4-inch.

CONSUMPTION

Supply to 400 people; 75 taps, 60 metered. Average daily consumption 15,000 to 20,000 gallons, all domestic; measured by meters.

WALTER SANATORIUM (LOWER HEIDELBERG TWP.), BERKS COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 200a

LOCATION

Southwestern Berks County, 2 miles southwest of Wernersville on tributary of Spring Creek.

WATER SUPPLY

A 4,700 gallon reservoir fed by six springs, and a 2,800 gallon reservoir fed by three springs, short distance southwest of hotel. Water soft.

Another reservoir, capacity 66,000 gallons, fed by springs and a spring run south of hotel operates elevator in hotel by hydraulic power; pressure 70 pounds.

DISTRIBUTION

By gravity through 6-inch to 3-inch pipe 500 feet long; pressures 30 to 75 pounds.

CONSUMPTION

Supply to 200 people. Stated average consumption 5,000 gallons, 60% domestic, 40% industrial. No means of measurement.

WERNERSVILLE BOROUGH, BERKS COUNTY

THE WERNERSVILLE WATER COMPANY

Estimated 1915 population, 800

LOCATION

Southwestern Berks County, on tributaries of Tulpehocken Creek, 9 miles west of Reading; on Philadelphia & Reading Ry., Harrisburg Division, Lebanon Valley Branch of Reading Transit line.

INDUSTRIES

Agriculture; flour mill and hosiery mill.

WATER SUPPLY

Wernersville Water Co., incorporated 1894 for Wernersville village.

SOURCE AND COLLECTION

Six springs on mountain side and 6-inch artesian well, 80 feet deep, 1.75 miles southwest of village; water piped to receiving chamber 20 feet below, which discharges into 190,000 gallon distributing reservoir. Six springs yield 20,000 gallons each and well yields 250,000 gallons daily. Water soft.

DISTRIBUTION

By gravity through 10-inch main, reducing to 8 and 6 inches; pressures 80 to 125 pounds; 1.5 miles distributing mains, 3-inch to 6-inch; 20 fire hydrants, 2½-inch.

CONSUMPTION

Supply to 800 people; 185 taps. Stated consumption 150,000 gallons daily, 70% domestic, 30% industrial. No means of measurement.

WEST CHESTER BOROUGH, CHESTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 11,767; increase since 1900, 2,243. Estimated 1915, 12,949x

LOCATION

County seat, eastern Chester County, near headwaters of Chester Creek and small tributaries of Brandywine Creek; on main line of Pennsylvania R. R., West Chester Street Ry. and Philadelphia & Chester traction line.

INDUSTRIES

Wheel works, separator works, two tag factories and crayon factory.

WATER SUPPLY

Municipal works built in 1854.

SOURCE AND COLLECTION

Chester Creek; 2,000,000 gallon storage reservoir near headwaters 2 miles northeast of borough. Water pumped through 10-inch main 3,116 feet long to 2,000,000 gallon distributing reservoir 1.25 miles northeast of center of borough, by Fern Hill pumping station in which are 1,000,000 and 1,800,000 gallon pumps.

Three miles below upper reservoir, on Chester Creek, auxiliary supply is taken from 3,000,000 gallon storage reservoir 3 miles east of borough. Water pumped through 14-inch main 13,000 feet long by Milltown pumping station, containing 2,000,000 gallon pump, to distributing reservoir. Water soft.

DISTRIBUTION

By gravity through 8-inch main; pressures 15 to 42 pounds; about 24 miles distributing mains, 4-inch to 8-inch; 225 fire hydrants, mostly 6-inch.

CONSUMPTION

Supply to 11,900 people, 57 taps metered; probably 40 taps are in township. Stated average daily consumption 918,000 gallons, 91% domestic, 9% industrial; measured by pump displacement.

COST AND REVENUE

Total cost of works: Milltown pumping station, $48,000; Fern Hill pumping station, $25,000; annual operating expenses, $4,500; gross revenue, $36,742.

WEST CONSHOHOCKEN BOROUGH, MONTGOMERY COUNTY

THE WEST CONSHOHOCKEN WATER COMPANY
(H. E. Ahrens and others)

Population 1910 census, 2,202; increase since 1900, 244. Estimated 1915, 2,300a

LOCATION

Southern Montgomery County, along west bank of Schuylkill River opposite Conshohocken; on Reading Division of Philadelphia & Reading Ry. Range in elevation, 150 feet.

INDUSTRIES

None. Residential suburb of Philadelphia.

WATER SUPPLY

The West Conshohocken Water Co., incorporated 1897 for West Conshohocken Borough.

SOURCE AND COLLECTION

Cream Valley Creek; pumping station in southwestern part of borough. Water flows from intake 2,000 feet upstream from pumping station to 42,000 gallon settling tank, thence through mechanical

filter of two 125,000 gallon units to clear water basin. Water then raised through 6-inch force main 2,200 feet long to 500,000 gallon distributing reservoir 0.25 mile west of borough limits and 300 feet above intake. In wet season pumps driven by overshot water wheel and at other times by gasoline engines. Pumping equipment two 240,000 gallon triplex pumps and two gasoline engines. Water soft.

DISTRIBUTION

By gravity through 8-inch main; pressures 80 to 130 pounds; 3.7 miles distributing mains, 2-inch to 8-inch, 41% 4-inch; 24 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,650 people; 336 taps. Average daily consumption 51,230 gallons, all domestic; measured by pump displacement.

WEST GROVE BOROUGH, CHESTER COUNTY

WEST GROVE WATER COMPANY

Population 1910 census, 1,261; increase since 1900, 332. Estimated 1915, 1,350a

LOCATION

Southern Chester County, on two small tributaries of White Clay Creek; along Central Division of Philadelphia, Baltimore & Washington R. R. and West Chester, Kennett & Wilmington Electric Ry. Built-up portion in valley, in east and west direction.

WATER SUPPLY

West Grove Water Co., incorporated 1904 for West Grove Borough.

SOURCE AND COLLECTION

(1) Springs; water collected by terra cotta pipes in well at pump station; pumped to 75,000 gallon standpipe on hill.

(2) Drilled well near standpipe; reported capacity 19,800 gallons daily; water pumped to standpipe.

Pumping equipment consists of one 131,000 gallon Deming triplex pump, one 47,500 gallon Deming triplex pump, one 43,200 gallon Myers Bulldozer pump, two 4 hp. and one 2.5 hp. gasoline engines Water soft.

DISTRIBUTION

By gravity through 6-inch main; pressures 5 to 70 pounds; 750 feet of 3-inch, 4-inch and 6-inch force mains, and 4.1 miles of distributing mains, 2-inch to 6-inch; 75% 3-inch and 4-inch; 14 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,340 people; 236 taps, 11 metered; average daily consumption 30,000 gallons, all domestic, 6,200 gallons metered; measured by pump displacement.

WEST READING BOROUGH, BERKS COUNTY

WEST READING WATER COMPANY

Population 1910 census 2,064. Estimated 1915, 2,600a

LOCATION

Central southern Berks County, directly across Schuylkill River from Reading; on Reading Transit Co.'s line. Built-up portion on hilly ground to elevation 120 feet above river.

INDUSTRIES

Residential and industrial suburb of Reading; large hat factory, carriage and blacksmith works, tool works, cement block works, textile machine works, brick yards, silk mill, flour mill and stone quarry.

WATER SUPPLY

West Reading Water Co., incorporated 1886 for Spring Township.

SOURCE AND COLLECTION

Schuylkill River; 10-inch intake pipe to pumping station on west bank at foot of Chestnut Street, in eastern end of borough. Water raised to settling basin, from which it flows through mechanical filter having two 250,000 gallon units, to clear water well; thence pumped by electrically-driven centrifugal pumps through 6-inch force main to 182,000 gallon standpipe on hill 0.5 mile from pumping station, in southwestern part of borough. Water soft.

An old pumping station, with 6-inch intake pipe in river, held in reserve for emergencies.

DISTRIBUTION

By gravity through 6-inch main; pressures 40 to 100 pounds; about 7 miles distributing mains, 2-inch to 6-inch; 17 fire hydrants 2½-inch.

CONSUMPTION

Supply to 2,500 people; 700 taps; includes eastern part of adjacent borough of Wyomissing. Average consumption 150,000 to 200,000 gallons, 2,300 gallons is industrial, through 17 metered taps.

INDUSTRIAL

Textile machine works and Alexander Hat Co. have private systems using drilled wells.

WOMELSDORF AND ROBESONIA BOROUGHS, BERKS COUNTY

WOMELSDORF CONSOLIDATED WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Womelsdorf,	1,301	165	1,350a
Robesonia,	(Inc. 1913)	----------	1,000b

LOCATION

Western Berks County; Womelsdorf, near headwaters of Tulpehocken Creek, near Lebanon County line, and Robesonia 3 miles east

near headwaters of Spring Creek, tributary of Tulpehocken Creek; on Lebanon Valley Branch of Philadelphia & Reading Ry. and Reading Transit Co. line. Range of elevations 40 feet.

INDUSTRIES

Agriculture. In Womelsdorf, cigar factory, hosiery mill, box factory and foundry. In Robesonia, cigar box factory, shirt factory and hosiery mill.

WATER SUPPLY

Womelsdorf Consolidated Water Co., incorporated 1904 by merger of The Womelsdorf Water Co., chartered 1895 for Womelsdorf Borough, supplies that borough; Robesonia Water Co., chartered 1898 for Robesonia.

SOURCE AND COLLECTION

Gold Spring, 2.5 miles south of borough; water flows to 275,000 gallon reservoir; drainage area 1 square mile. Reported minimum flow 100,000 gallons daily; flow decreases in summer. Water soft.

DISTRIBUTION

By gravity through 8-inch main 11,000 feet long; pressures 45 to 110 pounds; 6.5 miles distributing mains, 4-inch to 8-inch; 33 fire hydrants, 6-inch.

CONSUMPTION

Supply to 2,500 persons in two boroughs and intervening territory; 530 taps, 20 metered. No means of measuring; assuming 30 gallons per capita domestic, would be 75,000 gallons daily; 80% domestic and 20% industrial.

SECTION No. 4

SUSQUEHANNA RIVER

UPPER NORTH BRANCH SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

Table of Industrial Water Supplies (Coal Companies)

SECTION No. 4

SUSQUEHANNA RIVER, UPPER NORTH BRANCH SUB-BASIN

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section is in the northeastern part of Pennsylvania, adjacent to New York State. It comprises an area of about 3,274 square miles, or 7.3% of the area of the State, and is drained by the North Branch above the point where the Lackawanna River joins that stream in the northeastern part of Luzerne County. Included in this area are the greater part of Tioga, Bradford, Susquehanna and Wyoming counties, together with small portions of Wayne, Lackawanna, Sullivan, Luzerne, Potter and Lycoming counties.

SURFACE CHARACTERISTICS

In general the surface of this territory is the rough, hilly, plateau country usually found north of the Allegheny Mountains; some sections, however, are more rolling and are devoted to farming and grazing. This territory lies north of the terminal moraine, and consequently contains numerous lakes and ponds. The drainage in the eastern end is through the Tioga River northward into the Chemung River in New York State, and all along the northern part of this section smaller streams drain northward into the Susquehanna and tributaries in New York. The southern, central and eastern parts all drain through tributaries within the limits of Pennsylvania.

The most important tributaries from Pennsylvania are the Cowanesque, Tioga and Chemung rivers and Sugar, Wysox, Towanda, Wyalusing, Mehoopany, Tunhannock and Bowmans creeks, all large and valuable streams.

POPULATION

The population is small and scattered, only four boroughs having a population over 2,500, so that out of the total of over 139,000 in 1910, the urban population was but 13%. The 1910 census showed

a decrease of 10% over the previous decade. The district averages approximately 45 persons per square mile, as compared with 171 for the State. The large communities lie in the main river valley, a group of five boroughs in Susquehanna County having a population of 8,000, and another group of three boroughs at the mouth of the Chemung River, in Bradford County, 11,000.

RESOURCES AND INDUSTRIES

The chief natural resources of this area are flagstone quarries in Susquehanna and Wyoming counties; clay, glass sand and building stone in Tioga County, and a small amount of timber in the more inaccessible regions. The principal industries are farming, quarrying, lumbering and small manufacturing establishments in the larger boroughs.

WATER SUPPLY

There is abundant water in the streams, lakes and springs within this territory available for domestic and industrial use, comparatively little of which is being utilized. Of the 15,000,000 gallons total recorded consumption, about 30% is used in public systems, 15% in private plants of industries (principally tanneries), and 50% in private railroad water systems; in other words, the railroads use as much as the public systems and other industries combined. The total consumption of all classes is less than the amount consumed by the railroads alone in Section No. 3, Lower Delaware Sub-basin.

Out of the 40 public systems in this section, five are municipally owned, 23 by incorporated companies, and 12 small ones by private individuals or partnerships. The aggregate population served by water supply systems is somewhat less than 46,000. Springs are numerous, and as most of the communities are small the ground sources predominate, and about 75% of the delivery is by gravity. This region, therefore, has great unused water resources which may some day be of inestimable value to cities and industries in surrounding parts of Pennsylvania.

The following tables give a summary of the water supplies in this section, both domestic and industrial, and are followed by detailed descriptions of the water supply systems, arranged alphabetically according to places supplied.

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 4

Place	County	Ownership or Control	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Arnot,	Tioga, Bloss Twp.,	Arnot W. Co.,	2,200	2,200						1	
Blossburg,	Tioga,	Blossburg W. Co.,	2,250b	1,750			1				
Canton,	Bradford,	Citizens W. Co.,	1,800	1,800			1				
			(Temp.)	(Temp.)							
Clarks Summit,	Lackawanna,	Clarks Summit W. Co.,	2,500	2,500			1				
Dalton,	Lackawanna,	North Abington W. Co.,	900	525			1				
Elkland,	Tioga,	Municipal,	1,200b	1,200				1			
Factoryville,	Wyoming,	Nokomis W. Co.,	950	500			1				
Hallstead,	Susquehanna,	Hallstead W. Co.,	2,360b	1,625			1				
Great Bend,		Great Bend W. Co.,					—				
Harford,	Susquehanna, Harford Twp.,	Private,	250	100							1
Hop Bottom,	Susquehanna,	Hop Bottom Water Co.,	383	380			1				
Knoxville,	Tioga,	Municipal,	830b	800				1			
Laceyville,	Wyoming,	Municipal,	500	400				1			
		Private—three systems,		90b					3		
Laquin,	Bradford, Barclay Twp.,	Private, Central Pa. Lumber Co.,	1,100	80b							1
		Private, Pennsylvania Stave Co.,		800							1
Leraysville,	Bradford,	Leray W. Co. (Unincorporated),	375	75					1		
Mansfield,	Tioga,	Mansfield W. Co. (Spring Brook W. S. Co.)	1,750b	2,000			1				
Meshoppen,	Wyoming,	Meshoppen Borough W. Co.,	630	320			1				
Mehoopany,	Wyoming, Mehoopany Twp.,	Private—John Gaylord,	300	50b							1
Mill City,	Wyoming, Falls Twp.,	Private—Vossburg Bros.,	300	100							1
Montrose,	Susquehanna,	Consumers W. Co. of Montrose,	1,985	1,850			1				
New Albany,	Bradford,	New Albany W. Co.,	400b	400			1				
New Milford,	Susquehanna,	New Milford Water Co.,	650	500			1				
			(Temp.)	(Temp.)							
Nicholson,	Wyoming,	Nicholson W. Co.,	1,400	1,200			1				
North Mehoopany,	Wyoming, Mehoopany Twp.,	Private—H. S. Jennings,	300	75							1
Noxen,	Wyoming, Noxen Twp.,	Private, Edward Engleman,	500	40b							1
		Private—A. D. Kresge,		120b							1

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 4—Continued

Place	County	Ownership or Control	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Oakland,	Susquehanna,	Oakland W. Co.,	900b	800			1				
Sayre,	Bradford,	Sayre Water Co.,	10,800b	9,100			1				
Athens,	Bradford,						—				
South Waverly,	Bradford,	Waverly Water Co.,	1,050b	950			1				
Susquehanna,	Susquehanna,	Canawacta W. Supply Co.,	3,650	3,375			1				
Lanesboro,	Susquehanna,						—				
Thompson,	Susquehanna,	Thompson Borough W. Co.,	330b	180			1				
Tioga,	Tioga,	Tioga W. Wks. Co.,	540b	360			1				
Towanda,	Bradford,	Towanda Water Wks. Co.,	4,925b	4,900b			1				
Monroe,	Bradford,						—				
North Towanda,	Bradford, North Towanda Twp.,									—	
South Towanda,	Bradford, Towanda Twp.,									—	
Troy,	Bradford,	Municipal,	1,200b	1,000				1			
Tunkhannock,	Wyoming,	Tunkhannock W. Co.,	1,380b	1,800b			1				
Tunkhannock (suburbs),	Wyoming, Tunkhannock Twp.,		500b							—	
Westfield,	Tioga,	Municipal,	1,300	1,300				1			
Wyalusing,	Bradford,	Wyalusing W. Co.,	580	440			1				

bEstimated by Water Supply Commission

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 4—*Continued*

Place	County	Ownership or Control	Supply: Source: Surf.	Supply: Source: Ground	Supply: Source: Comb.	Supply: Method: Grav.	Supply: Method: Pumped	Supply: Method: Comb.	Consumption (average daily): Domestic (gallons)	Consumption (average daily): Industrial (gallons)	Consumption (average daily): Total (gallons)	Consumption (average daily): Per capita (gallons)
Arnot,	Tioga, Bloss Twp.,	Arnot W. Co.,	1	----	----	1	----	----	40,000a	75,000a	115,000a	------
Blossburg,	Tioga,	Blossburg W. Co.,	1	----	----	1	----	----	168,000a	138,000a	306,000a	------
Canton,	Bradford,	Citizens W. Co.,	1	----	----	1	----	----	240,000a	160,000a	400,000a	------
Clarks Summit,	Lackawanna,	Clarks Summit W. Co.,	----	1	----	----	----	1	108,000a	----------	108,000a	------
Dalton,	Lackawanna,	North Abington W. Co.,	----	1	----	----	----	1	24,500	500	25 000	48t
Elkland,	Tioga,	Municipal,	----	1	----	----	----	1	14,000a	----------	14,000a	------
Factoryville,	Wyoming,	Nokomis W. Co.,	1	----	----	1	----	----	----------	----------	20,000b	------
Hallstead,	Susquehanna,	Hallstead W. Co.,	1	----	----	----	----	1	100,000a	200,000a	300,000a	------
Great Bend,		Great Bend W. Co.,										
Harford,	Susquehanna, Harford Twp.,	Private,	1	----	----	1	----	----	----------	----------	3,000b	------
Hop Bottom,	Susquehanna,	Hop Bottom Water Co.,	----	1	----	1	----	----	----------	----------	20,000b	------
Knoxville,	Tioga,	Municipal,	----	1	----	----	----	1	98,000a	2,000a	100,000a	------
Laceyville,	Wyoming,	Municipal,	----	1	----	1	----	----	----------	----------	20,000b	------
		Private—three systems,	----	3	----	2	----	1	----------	----------	3,600b	------
Laquin,	Bradford, Barclay Twp.,	Private, Central Pa. Lumber Co.,	----	----	1	----	----	1	----------	----------	1,600a	------
		Private, Pennsylvania Stave Co.,	1	----	----	1	----	----	----------	----------	16,000b	------
Leraysville,	Bradford,	Leray W. Co. (Unincorporated),	----	1	----	----	----	1	13,000a	5,000a	18,000a	------
Mansfield,	Tioga,	Mansfield W. Co. (Spring Brook W. S. Co.)	----	----	1	----	----	1	----------	----------	100,000b	------
Meshoppen,	Wyoming,	Meshoppen Borough W. Co.,	1	----	----	1	----	----	----------	----------	28,000a	------
Mehoopany,	Wyoming, Mehoopany Twp.,	Private—John Gaylord,	----	1	----	1	----	----	----------	----------	2,000b	------
Mill City,	Wyoming, Falls Twp.,	Private—Vossburg Bros.,	----	1	----	1	----	----	----------	----------	2,000b	------
Montrose,	Susquehanna,	Consumers W. Co. of Montrose,	1	----	----	----	----	1	194,000	6,000	200,000	108t
New Albany,	Bradford,	New Albany W. Co.,	----	1	----	1	----	----	----------	----------	16,000b	------
New Milford,	Susquehanna,	New Milford Water Co.,	----	----	1	1	----	----	----------	----------	25,000b	------
Nicholson,	Wyoming,	Nicholson W. Co.,	1	----	----	1	----	----	120,000a	280,000a	400,000a	------

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 4—*Continued*

Place	County	Ownership or Control	Supply: Source: Surf.	Supply: Source: Ground	Supply: Source: Comb.	Supply: Method: Grav.	Supply: Method: Pumped	Supply: Method: Comb.	Consumption (average daily): Domestic (gallons)	Consumption (average daily): Industrial (gallons)	Consumption (average daily): Total (gallons)	Consumption (average daily): Per capita (gallons)
North Mehoopany,	Wyoming, Mehoopany Twp.,	Private—H. S. Jennings,	----	1	----	1	----	----	----	----	3,000b	----
Noxen,	Wyoming, Noxen Twp.,	Private, Edward Engleman,	----	1	----	1	----	----	----	----	250b	----
		Private—A. D. Kresge,	----	1	----	1	----	----	----	----	700a	----
Oakland,	Susquehanna,	Oakland W. Co.,	----	1	----	1	----	----	20,000	----	20,000	250t
Sayre,	Bradford,	Sayre W. Co.,	1	----	----	----	----	1	860,000	390,000	1,250,000	137t
Athens,	Bradford,											
South Waverly,	Bradford,	Waverly Water Co.,	1	----	----	1	----	----	33,000a	67,000a	100,000a	----
Susquehanna,	Susquehanna,	Canawacta W. Supply Co.,	----	----	1	----	----	1	400,000a	200,000a	600,000a	----
Lanesboro,	Susquehanna,											
Thompson,	Susquehanna,	Thompson Borough W. Co.,	----	1	----	----	----	1	----	----	3,600b	----
Tioga,	Tioga,	Tioga W. Wks. Co.,	----	----	1	----	----	1	40,000a	----	40,000a	----
Towanda,	Bradford,	Towanda Water Wks. Co.,	----	----	1	----	----	1	525,000a	175,000a	700,000a	----
Monroe,	Bradford,											
North Towanda,	Bradford, North Towanda Twp.,											
South Towanda,	Bradford, Towanda Twp.,											
Troy,	Bradford,	Municipal,	----	1	----	1	----	----	80,000a	20,000a	100,000a	----
Tunkhannock,	Wyoming,	Tunkhannock W. Co.,	----	1	----	----	----	1	----	----	200,000a	----
Tunkhannock (suburbs),	Wyoming, Tunkhannock Twp.,											
Westfield,	Tioga,	Municipal,	----	1	----	1	----	----	----	----	70,000b	----
Wyalusing,	Bradford,	Wyalusing W. Co.,	1	----	----	1	----	----	----	----	30,000b	----

a—Estimated by water companies
b—Estimated by Water Supply Commission
d—Domestic
t—Total

RAILROAD WATER SUPPLIES, SECTION NO. 4

ERIE

Station	Source of supply	Method of supply	Est. average daily consumption—gallons: Owned by R. R.	Est. average daily consumption—gallons: Public systems
Blossburg,	Blossburg W. Co.,			36,700
Big Hill,	Reservoir,	Gravity,	30,000	
Great Bend,	Reservoir,	Gravity,	18,000	
Starrucca (locos.),	Starrucca Creek,	Pumped 4" del.,	250,000	
	Pond,	Gravity,		
Susquehanna (locos. shops),	Susq. River,	Pumped,	1,500,000	
Tioga Jct.,	Tioga River,	Pumped,	45,000	

LEHIGH VALLEY

Sayre (shops),	Susq. River,	Pumped,	3,000,000	
Beth Run,	Wolf Run,	Gravity,	30,000	
Coxton,	Susq. River,	Pump 10" by 8",	1,000,000	
Falls,	Falls Creek,	Gravity,	77,600	
Irvings,	Susq. River,	Pump 6" by 5",	41,300	
Rummerfield,	Susq. River,	Pump 6" by 5",	124,000	
Laceyville,	Susq. River,	Pumped,	217,000	
Lynn,	Small run,	Gravity,	8,000	
	Meshoppen Creek,	Pumped 3" suction,	8,000	
Montrose,	Consumers W. Co.,			6,600
Stevenson,	Small run,	Gravity,	10,000	
	Towanda Creek,	Pump 2" feed,	10,000	
Tunkhannock,	{Elk Tanning Co., Susq. River,}	Pumped,	66,600	
Towanda,	Susq. River,	Pump 6" by 4",	60,000	
Tagues Eddy,	Tagues Eddy Creek,	Gravity,	93,000	

NEW YORK CENTRAL

Hammond,	Steven House Run,	Pumped,	55,000	
Elkland,	3"x20' well,	Pumped,	11,200	
Potter Brook,	Spring,	Gravity 3" W. strainer	24,000	

BUFFALO AND SUSQUEHANNA

Elkland,	Creek,	2½" by 2½" pump,		
	Well,	2½" by 2½" pump,	25,000	
Knoxville,	Knoxville Borough,	1" pipe,		2,000
	Creek,	3" gravity,		
Westfield,		3" by 2½" pump,	24,000	
Westfield Depot,	Westfield Borough,	1" pipe,		2,000

DELAWARE & HUDSON

Lanesboro,	Canawacta W. S. Co.,			25,000
	Starrucca Creek,	Gravity,	25,000	
Starrucca,	Plant owned by Erie R. R.,			

RAILROAD WATER SUPPLIES, SECTION NO. 4—Continued

DELAWARE, LACKAWANNA & WESTERN

Station	Source of supply	Method of supply	Est. average daily consumption—gallons	
			Owned by R. R.	Public systems
Clark Summit,	Driven well,	Pumped,	295,000	
Glenburn,	Springs,	Gravity,	200	
Dalton,	N. Abington W. Co.,			690
Alford,	Spring,			
	Driven well,	Hand pumped,	450	
Factoryville,	Nokomis W. Co.,			150
Foster,	Tanners Creek,	Gravity,	200	
Halistead,	Halistead W. Co.,			195,000
Kingsley,	Kingsley Creek,	Gravity,		
	Driven well,	Pumped,	235,000	
Montrose,	Driven well,	Pumped,	530	
New Milford,	New Milford W. Co.,			300
Nicholson,	Nicholson W. Co.,			295,000

NORTHERN CENTRAL

Minnequa,	Citizens W. Co.,	4″ service,		30,000
Snediker,	Well,	Pump 5″ by 4″,	30,000	
		Pump 4½″ by 4″,	17,000	
Troy,	Sugar Creek,	Pump 4″ by 4″,	55,000	
	Spring,	Gravity 4″,	20,000	

SUSQUEHANNA & NEW YORK

Barclay,	Cold Spring,	Gravity 4″ line,	75,000	
Towanda,	Towanda W. Co.,			7,500
Cold Spring,	Small spring trib. to Shrader Creek	Gravity 4″ pipe,	10,000	

NEW YORK, ONTARIO & WESTERN

Orson,	Mill Pond,	Pumped,	35,000	
Pleasant Mount,	Well,	Pumped,	50,000	
Totals,			7,576,080	600,940

INDUSTRIAL WATER SUPPLIES, SECTION NO. 4 (MISCELLANEOUS COMPANIES)

*Does not Include **All** the Smaller Companies*

Place	Company	Source	Method	Consumption (gallons per day)	
				Domestic	Industrial
Blossburg, Tioga County,	Elk Tanning Co.,	Blossburg W. Co.,			(250,000)
Elkland, Tioga County,	Proctor, Ellison & Co. (tannery),	Cowanesque River, Camp Brook, Drilled well	Pumped,		675,000
Harrison Valley, Potter County,	Elk Tanning Co.,	Stream,	Pumped,	4,000	
		9 springs,	Gravity,	(23 houses)	150,000
		2 drilled wells,	Pumped,		
Laquin, Bradford County,	Central Pa. Lumber Co.,	(See Laquin Sec. No. 4),		1,600 (160 pop.)	50,000
	Pennsylvania Stave Co.,	(See Laquin Sec. No. 4),			
Noxen, Wyoming County,	Armour & Co. (tannery),	Hettesheime Run,	Gravity,		
		Bowman's Creek (aux.),	Pumped,		
Powell, Bradford County,	Elk Tanning Co.,	Drilled well,			400,000
		Schrader Creek,			s360,000
Thompson, Susquehanna County,	Bordens Condensed Milk Co.,	Spring,			
Tunkhannock, Wyoming County,	Elk Tanning Co.,	N. Br. Susquehanna River, spring, well			200,000
Westfield, Tioga County,	Elk Tanning Co.,	Cowanesque River, Mill Creek, two springs			200,000
Total from private systems,				5,600	2,035,000

sWater for steam purposes

INDUSTRIAL WATER SUPPLIES, SECTION, NO. 4 (COAL MINING COMPANIES)

Does not Include All the Smaller Companies

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
Tioga County, Morris Run,	Morris Run Coal Min. Co.,	Morris Run,	Two reservoirs, 10,400,000 gals., gravity	1,200 (15 pop.)	w120,000 s34,000	1,619	8
Arnot,	Blossburg Coal Co.,	Arnot W. Co.,	(See description under Arnot)		s(46,000)	1,840	5
Total from private systems,				1,200	154,000		

sWater for steam purposes
wWater for washing coal

ARNOT (BLOSS TWP.), TIOGA COUNTY

ARNOT WATER COMPANY

Estimated 1915 population, 2,200

LOCATION

Southeastern Tioga County, 5 miles west of Blossburg, in Bloss Township; on Tioga Division of Erie R. R.

INDUSTRIES

Typical coal mining town; some lumbering.

WATER SUPPLY

Supplied since 1895 by Arnot Water Co., incorporated 1897 for Bloss Township.

SOURCE AND COLLECTION

Saw Mill Run, tributary of Johnson Creek, tributary to Tioga River; watershed area 500 acres. A 5,000,000 gallon reservoir on Saw Mill Run about 0.25 mile from village.

DISTRIBUTION

By gravity through 8-inch main from reservoir into distributing system; pressures 45 to 55 pounds; 6.8 miles distributing mains, 4-inch to 8-inch, mainly 4-inch; 13 fire hydrants, 4-inch.

CONSUMPTION

Supply to 2,000 people; 360 taps. Average daily consumption 115,000 gallons; maximum 125,000 gallons; 35% domestic, 65% industrial to Blossburg Coal Co. for locomotives, boilers and pumps. Supply to mines not adequate at all times, supplemented by spring and mine water.

BLOSSBURG BOROUGH, TIOGA COUNTY

BLOSSBURG WATER COMPANY
(J. B. Russel and others)

Population 1910 census, 2,303; decrease since 1900, 120. Estimated 1915, 2,250b

LOCATION

Northeastern Tioga County, on Tioga River, and Tioga Division of Erie R. R.

INDUSTRIES

Coal mining, Monroe tannery of Elk Tanning Co., shirt factory and planing mill.

WATER SUPPLY

Supplied since January, 1892, by Blossburg Water Co., incorporated 1891.

SOURCE AND COLLECTION

Two mountain runs, Taylor and Bellman runs—tributary to Tioga River.

Taylor Run; watershed area 2,500 acres, minimum flow, measured by weir during drought of 1908, 111,000 gallons per day. Storage reservoir, 2,830,000 gallons capacity, 1 mile above mouth and 3.5 miles south of borough; 10-inch reducing to 8-inch pipe delivers to distributing system. Ordinarily water is taken from intake at upper end of reservoir until time of low water, when it becomes necessary to draw on storage from lower end.

Bellman Run; watershed area 2,300 acres, minimum flow 241,000 gallons per day. Storage reservoir, 124,000 gallons capacity, 1 mile above mouth and 2.5 miles south of borough, from which an 8-inch reducing to 6-inch pipe delivers to distributing system. Water soft.

DISTRIBUTION

By gravity from each source; pressures 53 to 114 pounds. Distributing mains as follows:

Size (inches),	8	6	4	2	Total
Length (miles),	3.83	2.72	2.04	1.43	10.02

Forty-seven fire hydrants, 4½-inch.

CONSUMPTION

Supply to 1,750 people. Average daily consumption (1913), 306,000 gallons; 55% domestic, 45% industrial.

CANTON BOROUGH, BRADFORD COUNTY

THE CITIZENS WATER COMPANY

Population 1910 census 1,637, increase since 1900, 112. Estimated 1915, 1,800a

LOCATION

Southwestern Bradford County, near headwaters of Towanda Creek, on Northern Central Division of Pennsylvania R. R. Occupies moderately sloping land at head of broad valley; mountains to northwest and south.

INDUSTRIES

Agriculture; furniture factory, advertising novelties, harness, clothes hangers, map rollers and wooden novelty factories.

WATER SUPPLY

The Citizens Water Co., incorporated 1883 for Canton Borough.

SOURCE AND COLLECTION

(1) Mill Creek, small tributary of Towanda Creek, rising about 4 miles west of borough; 100,000 gallon reservoir constructed thereon about 1 mile from and 200 feet above borough; watershed area about 2 square miles.

(2) Additional supply from Lake Nephawin, about 2 miles south and 325 feet above borough; watershed area 0.5 square miles.

DISTRIBUTION

By gravity (1) from Mill Creek reservoir through 10-inch main; (2) from Lake Nephawin through 6-inch main. About 0.5 mile below lake is a filter plant installed by New York Filter Co. consisting of one wooden coagulating and settling tank of 10,000 gallons capacity; one sand filter tank of same size, and a clear water basin of masonry, capacity 120,000 gallons. Water filtered only at certain seasons to remove color and odor. Supplies from both Mill Creek and Lake Nephawin are treated with hypochlorite. Pressure in borough averages about 80 pounds. Distributing mains, including delivery mains, as follows:

Size (inches),	10	8	6	4	3	Total
Length (miles),	0.9	1.9	2.8	1.4	1.1	8.1
Per cent.,	11	23	35	17	14	100

Fifty-six fire hydrants, principally 4-inch.

CONSUMPTION

Total population supplied about 1,800, including 90% borough and a few outside, through 20 industrial and 518 taps. Average daily consumption 400,000 gallons, about two-fifths industrial. This gives per capita domestic consumption of 150 gallons and combined domestic and industrial 220 gallons; maximum consumption 600,000 gallons per day, 7% total consumption metered through seven industrial and four domestic taps.

HISTORICAL

The first public supply was furnished in 1873 by private parties and bought out by the Canton Water Co., incorporated 1877. This charter lapsed in 1883 and was succeeded by The Citizens Water Co., incorporated 1883.

CLARKS SUMMIT BOROUGH, LACKAWANNA COUNTY

CLARKS SUMMIT WATER COMPANY

Estimated population 1915, 2,500 (temporary)

LOCATION

Northwestern Lackawanna County, adjoining Glenburn Borough, near headwaters of South Branch of Tunkhannock Creek; on Delaware, Lackawanna & Western R. R. Business section and consider-

able part of community lies in flat area along river and railroad, with residential sections extending up side of adjacent hills.

INDUSTRIES

Residential community, construction work on Delaware, Lackawanna & Western R. R. cut-off has brought considerable temporary population which will leave upon its completion.

WATER SUPPLY

Supplied since 1900 by Clarks Summit Water Co., incorporated 1893 for South Abington Township.

SOURCE AND COLLECTION

From springs rising in meadow land 1 mile west of village and from two drilled wells in village; flow of springs fairly uniform throughout year. Water medium hard.

DISTRIBUTION

By gravity from distributing reservoir, capacity 750,000 gallons. Water from wells pumped directly into distributing system, surplus backing up into reservoir. Distributing mains 6.5 miles, 2 miles 6-inch and remainder 4-inch; 5 fire hydrants, 6-inch.

CONSUMPTION

Estimated population supplied, temporary, 2,500 on account of railroad construction force. Estimated average daily consumption 108,000 gallons, all domestic; maximum 118,000 gallons. Estimate of consumption based on amount delivered by pumps. These figures will be materially reduced when railroad construction work is completed.

DALTON BOROUGH, LACKAWANNA COUNTY

NORTH ABINGTON WATER COMPANY

Population 1910 census, 767; increase since 1900, 86. Estimated 1915, 900a

LOCATION

Western Lackawanna County, on tributary of Tunkhannock Creek, on main line Lackawanna R. R.

INDUSTRIES

Principally farming and residential community.

WATER SUPPLY

North Abington Water Co., incorporated 1894 for town of Dalton.

SOURCE AND COLLECTION

Supply from 8-inch drilled well 415 feet deep, about 0.75 mile west of borough. Water pumped from well into 288,000 gallon distributing reservoir; capacity of pump 170,000 gallons per day. Supply augmented by springs rising within reservoir. Another 8-inch well 192 feet deep in center of borough formerly used, is now abandoned. Flow from these wells decreases in summer. Water medium hard.

DISTRIBUTION

By gravity; 19 fire hydrants, 4-inch.

CONSUMPTION

Estimated population supplied 500 to 550; taps 112, all metered. Average daily consumption 25,000 gallons, about 2% industrial; estimated by pump displacement.

ELKLAND BOROUGH, TIOGA COUNTY

MUNICIPAL WATER WORKS

Population 1910, 1,175; increase since 1900, 66. Estimated 1915, 1200b

LOCATION

Northeastern Tioga County, on north bank of Cowanesque River, tributary of Tioga River, between boroughs of Osceola and Nelson; along New York Central R. R. and Buffalo & Susquehanna R. R. Occupies practically level lands in river valley, with steep hills rising close by on both sides of river.

INDUSTRIES

Agriculture; tannery, wooden toy factory and milk condensery.

WATER SUPPLY

Supplied by municipal works in operation since 1902.

SOURCE AND COLLECTION

Nine springs lying 0.5 to 2.5 miles north of borough and just across line in New York State. Largest, Dorrance Spring, yields about 30,000 gallons per day except in summer, discharging through 2-inch pipe to 242,000 gallon distributing and equalizing reservoir about 0.75 mile north of center of borough. Remaining eight springs piped into series of receiving basins, whence water is finally delivered through 3-inch pipe into 10-inch delivery main leading out of reservoir. Yield of springs considerably decreased during dry season. Estimated minimum flow 10,000 gallons per day.

Auxiliary supply obtained from three driven wells; water delivered by steam pump into distributing mains.

DISTRIBUTION

A 10-inch, reducing to 8-inch, main from distributing reservoir, about 0.75 mile long, into distributing mains; pressure about 100 pounds; 6.25 miles distributing mains, 1-inch to 8-inch; 36 fire hydrants, 4-inch.

CONSUMPTION

Estimated average daily consumption 14,000 gallons, all domestic.

COST AND REVENUE

Total cost of works, $22,000; annual operating expenses, $400; gross revenue, $1,700.

FACTORYVILLE BOROUGH, WYOMING COUNTY

THE NOKOMIS WATER COMPANY

Estimated 1910 census, 759; increase since 1900, 100. Estimated 1915, 950

LOCATION

Northwestern Wyoming County, near border between Wyoming and Lackawanna counties, on south branch of Tunkhannock Creek; on Delaware, Lackawanna & Western R. R. Farming community.

WATER SUPPLY

From the Nokomis Water Co., incorporated 1890 for Factoryville; works built in 1894.

SOURCE AND COLLECTION

Sheridan Lake, in Lackawanna County, 3 miles northeast of Factoryville,—a glacial pond having several small inlets, the largest rising in two other small ponds farther north; believed to be fed also by springs in bottom. Available yield not known, but capable of furnishing ample supply to borough.

DISTRIBUTION

By gravity from intake formed by small dam across outlet from lake; 10-inch main to borough; average pressure in borough 70 pounds; 16 fire hydrants, 4-inch.

CONSUMPTION

Estimated population supplied, about 500, remainder using private wells. Small supply to railroad. Average daily consumption not known, but on basis of population supplied should not exceed 20,000 gallons.

HALLSTEAD AND GREAT BEND BOROUGHS, SUSQUEHANNA COUNTY

HALLSTEAD WATER COMPANY
GREAT BEND WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Hallstead,	1,538	134	1,600
Great Bend,	788	48*	760

*Decrease

LOCATION

North central Susquehanna County, on North Branch of Susquehanna River; Great Bend on north and Hallstead on south side. Main line of Erie R. R. passes through Great Bend, and main line of Lackawanna R. R. follows other side of river through Hallstead. The towns are on broad, flat strips of land surrounded on all sides by mountains.

INDUSTRIAL

Railroad shops, chair factory, silk mill and cut glass factory in Hallstead; a chamois and cut glass factory in Great Bend.

WATER SUPPLY

From one system operating under two charters. Hallstead Water Co., incorporated 1892 and Great Bend Water Co., incorporated same date; incorporators and present owners of two companies are same.

SOURCE AND COLLECTION

From three sources, namely: DuBois Creek, Mingo Lake and Susquehanna River.

(1) DuBois Creek, about 5 miles below source and 3 miles south of Hallstead; storage reservoir, 15,790,000 gallons capacity, known as DuBois dam reservoir; elevation 253 feet above Hallstead. Area of water surface 5 acres; area of watershed 5 square miles. This is principal source of supply.

Two intakes about 2,000 feet from and below reservoir on main stream and a small tributary, known as Bankers Creek, connect to delivery main from upper reservoir by 4-inch pipes, but for use only in emergency. In such case water from main reservoir discharged into a small intermediate basin at same elevation as these intakes.

(2) Mingo Lake, a natural pond in pocket at top of mountain about 3 miles west of Hallstead. Formerly drained westward into Snake Creek, but outlet was dammed and tunnel 1,800 feet long dug eastward through mountain to carry 10-inch delivery main to borough.

About 0.5 mile from lake is Barry's reservoir, about 1,000,000 gallons capacity, formed by concrete dam across small brook, which connects to delivery main from lake.

(3) Susquehanna River, used for emergency supply for industrial purposes, principally to Delaware, Lackawanna & Western R. R. During 1908 drought, other sources are said to have been nearly exhausted and river water was used for a time for all purposes.

DISTRIBUTION

From DuBois dam reservoir by gravity through 12-inch reducing to 10-inch and 8-inch main. From Mingo Lake by gravity through 10-inch main joining 8-inch main from DuBois dam within Hallstead borough. Ross regulating valve reduces pressure to conform to that from other source. Pressures in borough average about 90 pounds.

Emegency supply from river taken through 10-inch pipe from middle of river to Worthington Duplex 1,000,000 gallon pump, which delivers through 6-inch main to Lackawanna R. R. round house and tanks and 8-inch main to connect with borough system.

Fire hydrants, 15 in Hallstead, 13 in Great Bend.

CONSUMPTION

About 1,200 consumers in Hallstead and 425 in Great Bend. Average daily consumption thought to be about 300,000 gallons, two-thirds industrial used principally by Lackawanna R. R. This gives about 188 gallons per capita for all purposes, or about 60 per capita for domestic alone. Large consumers metered. No means of accurately measuring total consumption.

COST AND REVENUE

Total cost of works said to be approximately $107,000; it is stated that 4% is paid on capital stock but no fund set aside for depreciation.

HARFORD (HARFORD TWP.), SUSQUEHANNA COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 250a

LOCATION

Central Susquehanna County, 7 miles south of New Milford and 3 miles east of Kingsley, on Lackawanna R. R. Two creeks, emanating from Tyler and Tingley Lakes in vicinity, unite in village and empty into Nine Partners Creek, tributary of Tunkhannock Creek, about 1 mile southeast. Farming district.

WATER SUPPLY

Private system installed about 1900, owned by E. E. Jones and other residents.

SOURCE AND COLLECTION

From creek flowing from Tyler Lake; about 0.25 mile from village is intake formed by small stone dam.

DISTRIBUTION

Four-inch pipe from intake in village; average pressure 60 pounds. Small amount of 3-inch distributing pipe in addition to delivery main; 5 fire hydrants 3-inch.

CONSUMPTION

Estimated population supplied 100. No means of measuring consumption; assuming 30 gallons per capita, would be 3,000 gallons per day.

HOP BOTTOM BOROUGH, SUSQUEHANNA COUNTY

HOP BOTTOM WATER COMPANY

Population 1910 census, 364; increase since 1900, 38. Estimated 1915, 383

LOCATION

South central Susquehanna County, on Martins Creek, at junction of Hop Bottom Creek; 6 miles above junction of Martins Creek with Tunkhannock Creek; on main line Lackawanna R. R. (Foster station).

INDUSTRIES

Agriculture, dairying, creamery and grist mill.

WATER SUPPLY

From Hop Bottom Water Co., incorporated 1911.

SOURCE AND COLLECTION

Springs 400 feet to 1 mile from borough. Water from each spring piped through 6-inch and 4-inch main by gravity to 200,000 gallon distributing reservoir about 133 feet above borough.

DISTRIBUTION

By gravity through 8-inch main to distributing system; average pressure about 55 pounds; 7 fire hydrants.

CONSUMPTION

Practically entire population supplied, taps 40. No means of measuring; assuming 50 gallons per capita, would be 20,000 gallons per day. No meters.

KNOXVILLE BOROUGH, TIOGA COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 840; decrease since 1900, 22. Estimated 1915, 830b

LOCATION

Northwestern Tioga County, on Cowanesque River; on New York Central and Buffalo & Susquehanna railroads. Built-up portion occupies flat lands along river, with only about 40 to 50 feet variation in elevation; hills rise abruptly on both sides of valley.

INDUSTRIES

Agricultural center, tobacco raising district; roller mill, tobacco factory, cheese factory and creamery.

WATER SUPPLY

Supplied by municipal water works since 1900.

SOURCE AND COLLECTION

Four springs north of borough and three springs and two drilled wells south and across Cowanesque River. On north side, the most remote springs, two in number, are about 1 mile away; water piped from these to 500,000 gallon distributing reservoir, one-half toward borough. Third spring, just east of reservoir, discharges through short 3-inch line directly into delivery main from reservoir. Fourth spring, known as Freeborn Spring, delivers directly into borough distributing system through 1,600 feet of 3-inch pipe. To south of borough, across river, about 0.5 mile distant, are remaining springs and wells. Wells are 6-inch diameter and 264 feet deep, penetrating a seamy slate and shale rock from which water is derived. Wells cased to solid rock; water pumped by two Gould pumps operated by 8 hp. gas engine. From pump 3-inch force main crosses river into borough. Normal water level in wells when not pumping about 100 feet below surface, or about 150 feet above river bed. Of the three springs in vicinity, one discharges through 3-inch pipe to collecting basin in pump house. Other two lie at sufficient elevation to discharge by gravity into force main from pumps to borough.

DISTRIBUTION

By gravity from reservoir on north side, by pumping from south side; 4.5 miles distributing mains; 32 fire hydrants, 4½-inch.

CONSUMPTION

Estimated population supplied 800; 190 taps. No means of actual measurement; estimated roughly at 100,000 gallons per day, about one-half supplied by wells; about 98% for domestic use.

COST AND REVENUE

Total cost of works, $14,000; annual operating expenses, $500; gross revenue, $2,000.

LACEYVILLE BOROUGH, WYOMING COUNTY

MUNICIPAL WATER SUPPLY

Population 1910 census, 479. Estimated 1915, 500

LOCATION

Extreme northwestern Wyoming County, along north bank of Susquehanna River; on main line of Lehigh Valley R. R.

INDUSTRIES

Agriculture; flagstone quarries; shipping point for farm and dairy products.

WATER SUPPLY

Municipal system.

SOURCE AND COLLECTION

Supply from six springs on hillside about 0.25 mile north of borough; three of springs deliver into 5,400 gallon covered reservoir; other three springs, located further east, discharge into another small reservoir, which in turn discharges through 1-inch pipe to 30,000

gallon distibuting reservoir; this is normal supply as long as springs are adequate. In dry seasons it is necessary to supplement same from Little Tuscarora Creek; intake about 1.5 miles above its mouth.

DISTRIBUTION

From first mentioned three springs by gravity through 3-inch main, and from second mentioned 30,000 gallon distributing reservoir through 6-inch main; from Little Tuscarora Creek intake by gravity through 4-inch main. Total length of distributing mains approximately 1.5 miles, divided as follows:

Size (inches),	6	4	3	Total
Length (miles),	0.2	0.8	0.5	1.5

Twenty-one fire hydrants, 4-inch.

CONSUMPTION

Not known; allowing 50 gallons per capita, would be 20,000 gallons per day; about 400 persons supplied. Effort being made to install meters so as to reduce consumption.

COST AND REVENUE

Total cost of works, (estimated) $10,000; annual operating expenses, $2,000; gross revenue, $1,500. It is stated that the indebtedness is about $14,000.

HISTORICAL

This borough was originally supplied by the Citizens Water Co. of Laceyville, incorporated 1893, the plant being purchased by borough in 1905.

PRIVATE SUPPLIES

From springs and from wells pumped by windmills. Three systems in operation supply several families. The first of these is owned by Brink & Rugg, supplying about eight families east of school-house; supply by gravity from spring on hillsile north of town. Water collected into small reservoir and delivered through ¾-inch pipe.

Another supply, owned by Whipple Bros., supplies four houses in eastern part of borough. Water pumped from drilled well into 13,000 gallon reservoir on hill and delivered by gravity.

Third supply to six families west of Little Tuscarora Creek under combined ownership. Supply by gravity from spring on hill west of creek.

LAQUIN (BARCLAY TWP.), BRADFORD COUNTY

PRIVATE SUPPLIES

Estimated population 1915, 1100a

LOCATION

Southwestern Bradford County, along Shrader Branch of Towanda creek; on Susquehanna and New York R. R., 15 miles southwest of Towanda Borough.

INDUSTRIES

Most of population employed in mills of Central Pennsylvania Lumber Co. and allied concerns, the Barclay Chemical Co., the Pennsylvania Hub and Veneer Co., Shrader Wood Co.; also Pennsylvania Stave Co., an independent concern.

WATER SUPPLY

About one-half population receive water supply from private systems of Central Pennsylvania Lumber Co. and Pennsylvania Stave Co.

CENTRAL PENNSYLVANIA LUMBER COMPANY

SOURCE AND COLLECTION

Three springs rising from hillside north of village; estimated minimum yield 4,000 gallons per day. Water collected into a 12,000 gallon wooden tank. Water soft. An auxiliary supply secured during droughts from drilled well 190 feet deep at mill. Water hard. Water for boiler purposes in mills and for fire protection, amounting to 50,000 gallons per day, secured by pumping from Shraders Branch.

DISTRIBUTION

(1) For domestic purposes: Spring water from tank delivered by gravity through 2½-inch pipe; supply from well pumped; capacity of pump 20,000 gallons per day; pressure about 35 pounds. Distributing pipes about 1.33 miles, 8% 2½-inch, 57% 1½-inch, and 35% ¾-inch.

(2) For fire protection and steam boilers. Distributing mains as follows:

Size (inches),	10	8	6	5	4	2½	Total
Length (miles),	0.06	0.76	0.32	0.38	0.13	0.07	1.72
Per cent.,	3.3	44.0	18.7	21.9	7.7	4.4	100

CONSUMPTION

Supply to 80 taps. Average daily consumption not measured; estimated at 1,600 gallons.

PENNSYLVANIA STAVE COMPANY

SOURCE, COLLECTION AND DISTRIBUTION

Springs in mountain discharging into concrete tanks and delivered through 1-inch pipes.

CONSUMPTION

Water used for plant and houses of about 160 employees.

LERAYSVILLE BOROUGH, BRADFORD COUNTY

LERAY WATER COMPANY (UNINCORPORATED)

Population 1910 census, 326; decrease since 1900, 49. Estimated 1915, 375

LOCATION

Extreme eastern Bradford County, near divide between Wysox and Wyalusing Creeks; nearest railroad Lehigh Valley, 16 miles to Wyalusing and 18 miles to Towanda.

INDUSTRIES

Farming community; furniture factory and foundry.

WATER SUPPLY

From LeRay Water Co., an unincorporated organization owned by J. V. Keeler.

SOURCE AND COLLECTION

Drilled well 143 feet deep at furniture factory. Water medium hard.

DISTRIBUTION

Water pumped directly into distributing mains by 35,000 gallon Rumsey pump, surplus going to two reservoirs on top of hill near center of town; capacity 24,000 and 80,000 gallons. Average pressure in borough 40 pounds; 3,000 feet distributing mains, principally 6-inch and 4-inch; 8 fire hydrants, connected to separate 6-inch main to reservoir.

CONSUMPTION

About 75 persons supplied. Average daily consumption roughly estimated at 18,000 gallons; furniture factory uses perhaps 5,000 gallons.

MANSFIELD BOROUGH, TIOGA COUNTY

MANSFIELD WATER COMPANY
(A. Watres and others)

Population 1910, 1,645; decrease since 1900, 202. Estimated 1915, 1,750b

LOCATION

Central Tioga County on Erie R. R.

INDUSTRIES

Farming community; grist mill and woodworking factory. State Normal School.

WATER SUPPLY

Mansfield Water Co., incorporated 1891; under management of officials connected with Spring Brook Water Supply Co. in Wilkes-Barre and vicinity.

SOURCE AND COLLECTION

Principal source Taylor Run, tributary of Lambs Creek. On Taylor Run 11,000,000 gallon storage reservoir, constructed in 1913 to replace small one which did not provide adequate supply; watershed area 1.12 square miles. Water delivered by gravity through 12-inch reducing to 8-inch pipe line.

Previous to 1914 auxiliary supply was derived from Lambs Creek, but it is not expected to use this supply hereafter. Water was taken from small intake, passed through slow sand filter of sand, gravel and brick, thence through 8-inch pipe to 84,000 gallon reservoir. Two adjacent springs also feed reservoir. From reservoir water was pumped through 6-inch main about 0.25 miles long into delivery main from Taylor Run.

Pumping station east of reservoir contains two Knowles pumps, one single acting and one double acting.

DISTRIBUTION

Pressures 70 to 108 pounds; 42 fire hydrants, 6-inch.

CONSUMPTION

Estimated population supplied 2,000; 330 taps.

MEHOOPANY (MEHOOPANY TWP.), WYOMING COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 300

LOCATION

Northwestern Wyoming County, on Susquehanna River and main line of Lehigh Valley R. R. Farming district.

WATER SUPPLY

A few families supplied by private system of John Gaylord, proprietor of hotel.

SOURCE AND COLLECTION

From spring on hillside, discharging through 1½-inch pipe into small covered reservoir. Flow of spring said to be never failing and ample to supply entire village.

DISTRIBUTION

By gravity from reservoir through 1½-inch pipe. Average pressure about 60 pounds.

CONSUMPTION

No estimate available. Hotel and about ten houses supplied. Remainder of village depend on private wells and springs.

MESHOPPEN BOROUGH, WYOMING COUNTY

MESHOPPEN BOROUGH WATER CO.

Population 1910 census, 630; increase since 1900, 21. Estimated 1915, 630

LOCATION

Northwestern Wyoming County, at junction of Meshoppen Creek with Susquehanna River.

INDUSTRIES

Farming district; shipping point for farm products; planing mills, sawmill, flagstone quarry and mill.

WATER SUPPLY

Meshoppen Borough Water Co., incorporated 1869.

SOURCE AND COLLECTION

Supply from Little Meshoppen Creek; intake about 1.5 miles above mouth formed by small concrete dam, 150,000 gallons capacity. Water from reservoir flows through small filter bed of charcoal and gravel into small settling basin.

DISTRIBUTION

By gravity from settling basin to distributing mains through 10-inch reducing to 8-inch and 6-inch pipe line. On hill l k of borough is covered storage reservoir, 30,000 gallons capaci , into which water backs up; when creek water is turbid main supply line is shut off and storage reservoir drawn upon.

Distributing mains as follows:

Size (inches),	10	8	6	4	3	Total
Length (miles),	0.5	0.1	1.4	1.7	0.3	4.0

Seventeen fire hydrants.

CONSUMPTION

Estimated population supplied 320. Estimated average daily consumption 28,000 gallons per day. All consumers on flat rate.

HISTORICAL

Original name of company was Meshoppen Water Co., incorporated by special act in 1869; works built during 1869 and 1870. In 1883, company sold at sheriff's sale and reorganized as Meshoppen Borough Water Co.

MILL CITY (FALLS TWP.), WYOMING COUNTY

PRIVATE SUPPLY

Estimated population 1915, 300

LOCATION

Western Wyoming County, on tributary of Buttermilk Creek and 1 mile south of Lake Winola, a summer resort reached by electric railway from Scranton.

INDUSTRIES

Small grist and lumber mills, but little operated.

WATER SUPPLY

From small system owned largely by Vosburg Bros., who are also proprietors of a general store in village.

SOURCE AND COLLECTION

From springs near highway in northerly end of village, rising in bottom of a concrete basin of about 14,000 gallons capacity, with frame shelter, at elevation 60 to 80 feet above village center. Springs emanate from seamy rock; comparatively small yield.

DISTRIBUTION

By gravity from reservoir through 3,800 feet of pipe, principally 2-inch diameter. No fire hydrants.

CONSUMPTION

About 100 persons supplied. No means of measuring consumption; allowing 20 gallons per capita, would be 2,000 gallons per day.

MONTROSE BOROUGH, SUSQUEHANNA COUNTY

CONSUMERS WATER COMPANY OF MONTROSE, PA.

Population 1910 census, 1914; increase since 1900, 87. Estimated 1915, 1985

LOCATION

County seat; central Susquehanna County; on Montrose Branch of Lehigh Valley R. R.; on peak of the table-land, from which drainage is in all directions.

INDUSTRIES

Center of farming and dairying district; summer resort; scroll saw works, foundry and planing mill.

WATER SUPPLY

From Consumers Water Co., Montrose, incorporated 1892.

SOURCE AND COLLECTION

From Jones Lake, a natural body of water about 1 mile east of borough Water pumped through 8-inch main into 1,000,000 gallon distributing reservoir on hill in northern part of borough; capacity of pump 350,000 gallons per day.

DISTRIBUTION

By gravity from distributing reservoir through 8-inch reducing to 6-inch, mains. Pressures average about 110 pounds. Distributing mains as follows:

Size (inches),	8	6	4	3	2	Total
Length (miles),	0.75	0.75	5.0	1.0	0.5	7.5
Per cent.,	10	10	67	6.5	6.5	100

Twenty-four fire hydrants, having 4-inch connection to main.

CONSUMPTION

Estimated permanent population supplied 1,850; taps 365, 1% industrial. Average daily consumption 200,000 gallons, 3% industrial; 8 meters, none industrial. Consumption estimated by means of pump displacement.

NEW ALBANY BOROUGH, BRADFORD COUNTY

NEW ALBANY WATER COMPANY

Population 1910, 413; decrease since 1900, 12. Estimated 1915, 400b

LOCATION

In mountainous region of southern Bradford County, near headwaters of South Branch of Towanda Creek; on State line and Sullivan Division of Lehigh Valley R. R.

INDUSTRIES

Farming region; creamery, two grist mills, saw mill, woodworking plant, hay cutting and baling plant.

WATER SUPPLY

From New Albany Water Co., incorporated 1896.

SOURCE AND COLLECTION

Supply from five springs in ravine 2 miles southeast of borough; water medium hard. Springs walled up, covered and piped by 4-inch main to two storage and distributing reservoirs, combined capacity 500,000 gallons, on hill about 0.25 mile west of borough.

DISTRIBUTION

By gravity through 6-inch main from distributing reservoir to distributing system; pressure about 75 pounds; 0.75 mile distributing mains; 8 fire hydrants, 6-inch.

CONSUMPTION

Estimated population supplied about 400. No means of determining consumption. About 130 taps, four industrial.

NEW MILFORD BOROUGH, SUSQUEHANNA COUNTY

NEW MILFORD WATER COMPANY

Population 1910 census, 654; decrease since 1900, 61. Estimated 1915, 650

LOCATION

Near center of Susquehanna County on Salt Lick Creek, along main line Lackawanna R. R. about 7 miles south of Hallstead.

INDUSTRIES

Tannery, saw and two grist mills, flagstone quarries.

WATER SUPPLY

From New Milford Water Co., incorporated 1892.

SOURCE AND COLLECTION

Supply from seven springs in valley of Salt Lick Creek, about 2 miles southeast of borough, and from East Lake Creek, tributary of Salt Lake Creek at this point. Each spring walled up, covered with flagstone and piped into covered distributing reservoir, 48,000 gallons capacity, near junction of East Lake Creek with Salt Lick Creek. In East Lake Creek is intake from which water is carried through crushed stone filter into 8-inch main, discharging into distributing reservoir a short distance below. Water soft. Flow of springs well maintained except in seasons of severe drought.

DISTRIBUTION

By gravity through 8-inch main from distributing reservoir; pressures 65 to 70 pounds; 3 miles distributing mains; about 26 fire hydrants.

CONSUMPTION

Estimated population supplied about 500; 125 taps. Average daily consumption not known; assuming 50 gallons per capita, would be 25,000 gallons per day.

NICHOLSON BOROUGH, WYOMING COUNTY

NICHOLSON WATER COMPANY

Population 1910 census, 852; decrease since 1900, 41. Estimated 1915, 1400. (Increase probably due to Lackawanna R. R. cut-off construction; not permanent.)

LOCATION

Northeastern Wyoming County, on Tunkhannock Creek, at junction of Martin Creek; on Delaware, Lackawanna & Western R. R.

INDUSTRIES

Bluestone quarrying, farming, lumbering, cutlery works, creamery and milk condensery. Work on the great concrete viaduct for Delaware, Lackawanna & Western R. R. cut-off is under construction (1914) and causes temporary increase in population.

WATER SUPPLY

Nicholson Water Co., incorporated 1892, for Nicholson Borough.

SOURCE AND COLLECTION

Supply from Horton Creek, tributary entering Tunkhannock Creek about 1 mile south of borough. Emergency supply by pumping from Tunkhannock Creek in borough.

Intake reservoir, 3,000,000 gallons capacity, on Horton Creek, about 2 miles northeast of borough and just south of Susquehanna-Wyoming county line; watershed area about 15 square miles. Included in this area two large ponds about 6 miles north of town; one, called Lake Side, capacity 130,000,000 gallons, used as storage reservoir by company. Water treated with hypochlorite from plant about 1,000 feet below reservoir. Water soft.

DISTRIBUTION

By gravity from reservoir through 8-inch supply main; average pressure about 40 pounds; about 1.6 miles distributing mains, 23% 6-inch, 59% 4-inch and 18% 2-inch; 15 fire hydrants 5-inch.

CONSUMPTION

Population supplied at present about 1,200, but will undoubtedly be considerably decreased after completion of railroad construction work referred to. Estimated average daily consumption at present 400,000 gallons (no means of accurate measurement), about 70% industrial used largely by railroad. When railroad construction work is completed, normal consumption will be about 60% of above.

NORTH MEHOOPANY (MEHOOPANY TWP.), WYOMING COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 300

LOCATION

Northwestern Wyoming County, on west bank of Susquehanna River, 0.25 mile above mouth of Mehoopany Creek. Farming district.

WATER SUPPLY

Private system owned by H. S. Jennings.

SOURCE AND COLLECTION

From two points, each containing two springs, up valley of Little Mehoopany Creek.

DISTRIBUTION

From first springs by gravity through 1½-inch pipe line; head 30 feet. From second springs water piped into 700 gallon reservoir; delivered by gravity through 1½-inch pipe to village, head about 75 feet. Supply appears to be ample at all times. No fire hydrants.

CONSUMPTION

About 75 persons supplied. Actual consumption not measured, but probably does not exceed 3,000 gallons per day.

NOXEN (NOXEN TWP.), WYOMING COUNTY

PRIVATE SUPPLIES

Estimated 1915 population, 500

LOCATION

Southern Wyoming County, on Bowman Creek; on Lehigh Valley R. R., Bowman's Creek Branch.

INDUSTRIES

Principal industry is a tannery; lumbering in adjacent territory.

WATER SUPPLY

Two public water systems, one on north and one on south side of creek, owned by Edward Engelman and A. D. Kresge. Tannery has private supply.

SYSTEM OF EDWARD ENGELMAN

GENERAL DESCRIPTION

Spring on mountainside north of village; water collected into small concrete basin. Minimum flow in 1908 said to have been about 750 gallons per day. Distributed by gravity through 1½-inch pipe to seven families and two school buildings.

SYSTEM OF A. D. KRESGE

GENERAL DESCRIPTION

Springs on mountain south of village. Water collected into small basins, piped through 4-inch main, reducing to 3½-inch and finally to 1½-inch, by gravity to 29 houses and one livery stable. Consumption estimated from 600 to 800 gallons daily. Pressures about 25 pounds.

OAKLAND BOROUGH, SUSQUEHANNA COUNTY

OAKLAND WATER COMPANY

Population 1910 census, 915; decrease since 1900, 88. Estimated 1915, 900b

LOCATION

Northeastern corner Susquehanna County, on North Branch of Susquehanna River. Directly across stream are boroughs of Susquehanna and Lanesboro, which, with Oakland, form practically one community; the latter a residental district. Borough occupies steep hillside along northerly bank of river.

WATER SUPPLY

Oakland Water Co., incorporated 1896.

SOURCE AND COLLECTION

From 12 springs rising at various points on hillside above town; drilled well used for auxiliary purposes.

(1.) Shreiber Spring rises about 1.25 miles north of center of borough; discharges through 2-inch pipe into covered reservoir, 135,000 gallons capacity, at elevation 200 feet above river. Winter and spring yield 8,000 to 10,000 gallons per day. At reservoir 6-inch well 256 feet deep, 30,000 gallons per day minimum yield, water from which is pumped into reservoir during dry season; capacity of pump 30,000 gallons per day.

(2.) Five springs known as Post Springs rise farther west on hillside about 1 mile from center of borough. Winter and spring yield 15,000 to 18,000 gallons per day.

(3.) Still further west, about 1.5 miles from center of borough, a group of six springs known as Carver Springs; estimated winter and spring yield 25,000 gallons daily; 5,000 gallon covered distributing reservoir.

Flow from all these springs decreases materially in summer.

DISTRIBUTION

By gravity from several reservoirs; from distributing reservoir at Shreiber Spring by 4-inch main to borough; from Post Springs delivery main leads about 0.5 mile east, connecting in 4-inch pipe from Shreiber Spring; from Carver Springs south and then east 1.75 miles to center of borough, feeding through westerly end of distributing system. Equalizing reservoir, capacity 10,000 gallons, 0.5 mile north of center of borough, leads off 4-inch from Shreiber and Post springs, same elevation as reservoir at Shreiber Spring. Distributing mains about 3 miles, 28% 4-inch and 72% 3-inch and smaller; 4 fire hydrants.

CONSUMPTION

Estimated population supplied about 800. Average daily consumption 20,000 gallons, entirely domestic, maximum 25,000 gallons, estimated from pump displacement when drawing largely from well.

COST AND REVENUE

Annual operating expenses, $843; gross revenue, $2,012.

SAYRE AND ATHENS BOROUGHS, BRADFORD COUNTY

THE SAYRE WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Sayre,	6,426	1,183	7,000b
Athens,	3,796	47	3,800b

LOCATION

North central Bradford County, just south of New York State line, in fork between North Branch of Susquehanna River and its tributary, Chemung River, just north of their confluence; adjoining boroughs are practically one community. Occupies comparatively flat lands, with low hills across river to east.

INDUSTRIES

Essentially railroad towns, Lehigh Valley R. R. having large shops at Sayre; machinery and iron works, brass foundries, car wheel plant, silk mill and woodworking establishments.

WATER SUPPLY

The Sayre Water Co., incorporated 1881 for Sayre and Athens villages and Athens Township.

SOURCE AND COLLECTION

Supply from North Branch of Susquehanna River, through intake chamber near east shore, opposite Sayre Borough; 20-inch pipe to suction well at pumping station on west bank, where water is forced through mechanical pressure filters, eight units, capacity 3,000,000 gallons, thence into distributing system.

DISTRIBUTION

From filters, 10-inch and 16-inch mains deliver into distributing system, and 10-inch and 14-inch mains cross river to 4,000,000 gallon equalizing reservoir on hill about 0.75 mile distant. Pressures 75 to 90 pounds. Pumping equipment one 3,000,000 and one 5,000,000 gallon Worthington duplex triple expansion pumps with 16-inch and 20-inch suctions.

Operation of pumping station subject to interruption from floods; length of interruption reduced through special appliances and equipment for keeping out water until nearly crest height. Operatives live in quarters in upper story of station during flood period so that station is not out of commission more than a day or two, during which period storage in distributing reservoir must be drawn upon. Distributing mains as follows:

Size (inches),	16	14	10	8	6	4	Total
Length (miles),	1	1	7	10	10	11	40
Per cent.,	2.5	2.5	17.5	25	25	27.5	100

One hundred thirteen fire hydrants, 6-inch and 5-inch.

CONSUMPTION

Estimated population supplied 9,100; taps 2,575 domestic and 20 industrial. Average daily consumption, exclusive of quantity supplied to Waverly Water Co., 1,000,000 gallons, 69% domestic, 19% industrial and 12% for public use. About 30% of taps metered. Total amount drawn from river and filtered 1,250,000 gallons, the difference, or 25%, being used for filter wash water, which is again discharged into river. Maximum daily consumption 1,666,000 gallons exclusive of Waverly. Average per capita consumption (exclusive of filter wash) about 100 gallons, and per consumer, about 110 gallons per day.

SUPPLY TO WAVERLY WATER CO.

In addition to quantities given above, there is furnished to Waverly Water Co. four to eight weeks of year, during dry season, varying amounts up to 675,000 gallons per day, or practically entire supply for South Waverly, Pa., and Waverly, N. Y. At such times, therefore, the draft from river is 1,925,000 gallons per day, of which one-quarter is returned as wash water.

SOUTH WAVERLY BOROUGH, BRADFORD COUNTY

WAVERLY WATER COMPANY

Population 1910, 1,084; decrease since 1900, 131. Estimated 1915, 1,050b

LOCATION

North central Bradford County, directly north of Sayre and Athens, between North Branch of Susquehanna River and Chemung River, with its northern boundary New York-Pennsylvania line. Closely

affiliated in business and social way with aforesaid places. Adjoining South Waverly Borough is Waverly Village, in New York State, population 4,855; form practically one community.

INDUSTRIES

Railroad towns; Lehigh, Erie and Lackawanna railroads.

WATER SUPPLY

Waverly Water Co., in New York State, operating under charter of South Waverly Water Co., incorporated 1881 and leased to former company, some of whose stockholders own stock of latter.

SOURCE AND COLLECTION

Normal supply of Waverly Water Co. by gravity from Dry Run, about 1.25 miles northwest of Waverly, in New York State; two reservoirs, one just below other, drainage area 1,337 acres. Water soft. Upper reservoir capacity 30,000,000 gallons; lower, or distributing reservoir, capacity 90,000,000 gallons. Source inadequate in summer. Occasionally during one or two months of year, company is obliged to have recourse to Sayre Water Co. for auxiliary supply amounting to, at times, entire consumption.

DISTRIBUTION

By 12-inch delivery main from reservoir to town; average pressure 85 pounds. Distributing system of Waverly and South Waverly constitute one physical unit, containing 14.3 miles; total length of distributing mains in South Waverly 4.7 miles, as follows:

Size (inches),	8	6	4	Total
Length (miles),	0.8	0.6	3.3	4.7
Per cent.,	17.0	12.6	70.4	100

Seven fire hydrants, 4-inch.

CONSUMPTION

Estimated population supplied 950. Estimated average daily consumption 100,000 gallons, 33% domestic. Industrial consumption is for railroad purposes. No means of accurate measurement. Total consumption, Waverly and South Waverly 670,000 gallons per day.

SUSQUEHANNA AND LANESBORO BOROUGHS, SUSQUEHANNA COUNTY

CANAWACTA WATER SUPPLY COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Susquehanna,	3,478	335	2,900
Lanesboro,	771	50	750

LOCATION

Adjoining boroughs in northeastern corner of Susquehanna County, on southwest bank of Susquehanna River. Susquehanna on steep hillside, Lanesboro comparatively flat. Dams at Lanesboro and western end of Susquehanna furnish water for electric power, backwater extending 8 miles upstream. Erie R. R. passes through both boroughs; Lanesboro also on Delaware & Hudson R. R.

INDUSTRIES

Principally railroad communities; Erie R. R. shops and yards at Susquehanna; silk mill and metal manufacturing in Susquehanna; electric motor works in Lanesboro, and flagstone quarries in surrounding hills.

WATER SUPPLY

Canawacta Water Supply Co., incorporated 1889.

SOURCE AND COLLECTION

Two general sources, (1) Drinkers Creek and adjacent springs, and (2) Canawacta Creek and adjacent springs.

(1) Drinkers Creek rises in Fox Pond, 6 miles south of Susquehanna, and flows north through a narrow valley into Susquehanna River within borough.

Dam at Fox Pond gives storage of 50,000,000 gallons. Two miles below Fox Pond is storage reservoir called Round Pond, 5,000,000 gallons capacity. One mile farther downstream and 2 miles south of Susquehanna is intake; watershed area 3.3 square miles at eleva-

tion 1,197, from which water is passed through small filter bed of sand and gravel; 4-inch pipe to collecting basin at elevation 1,180, which also receives two 2-inch pipes from springs; two springs on each pipe. Collecting basin has 810 feet of 3-inch and a parallel line of 2-inch pipe to Drinkers Creek reservoir, a covered reservoir of 115,000 gallons capacity, along creek below intake, at elevation 1167. Delivery pipe line 800 feet of 6-inch and 6,520 feet of 4-inch, continuing as 4-inch for 3,000 feet to Main Street.

Dutchers Spring, 1,500 feet west, at Drinkers Creek intake, at elevation 1,229; 2-inch gravity main 8,112 feet to Jackson Street in southeastern part of Susquehanna, where it enlarges to 3-inch for 1,045 feet to Jackson Street reservoir, a covered equalizing reservoir, capacity 478,000 gallons, at elevation 1,127. Adjacent to this reservoir and connected with it is 112,500 gallon reservoir fed by 2-inch line from 50,000 gallon collecting basin a short distance southeast, which receives flow from two springs, elevations 1,171 and 1,168, through 1½-inch pipes.

(2) Canawacta Creek rises in Comfort Pond, about 4 miles southeast of Lanesboro, and flows northwesterly through narrow valley into Susquehanna River at Lanesboro, about 1 mile above mouth of Drinkers Creek. The outlet of Comfort Pond is dammed, forming a reservoir of 12,000,000 gallons capacity. One mile downstream is Reed reservoir, 1,500,000 gallons capacity, with watershed area 3.9 square miles; water passed through small sand and gravel filter and thence through 9,000 feet of 12-inch and 5,000 feet of 10-inch main to Lanesboro.

About 2 miles below Reed reservoir a supply from three nearby springs enters the 12-inch main; first collected in 112,500 gallon reservoir and thence delivered into main.

DISTRIBUTION

Susquehanna and Lanesboro distributing systems connected by 4-inch main, 1 mile in length. Range of elevation in the territory served about 250; approximate elevation along river in lowest part of boroughs, 1,017. Elevation of equalizing reservoir in Susquehanna 1,127

Distributing mains as follows (exclusive of supply from intakes to borough):

Size (inches),	6	4	2	1¾	1½	1	¾	Total
Length (miles),	0.6	9.8	0.2	0.1	0.6	0.8	0.1	12.2
Per cent.,	5.0	80.6	1.9	0.9	4.9	6.0	0.7	100

Pressures 10 to 135 pounds; 27 fire hydrants, 4-inch.

CONSUMPTION

Estimated population supplied 3,375; 800 taps. Average daily consumption estimated at 600,000 gallons, 66% domestic. All large consumers, as saloons, stables, manufacturing plants, railroads, etc., are required to be metered. Domestic consumers will be metered on request and at their expense.

PRIVATE SUPPLY—ERIE R. R. SHOPS AND YARDS

Water for steam boilers in shops and locomotive tanks in yards pumped from river. Estimated average daily consumption 1,500,000 gallons. Pumps are three Worthington, capacity 3,600,000 gallons per day.

In dry seasons a small quantity of water is furnished without charge to borough for street sprinkling.

THOMPSON BOROUGH, SUSQUEHANNA COUNTY

THOMPSON BOROUGH WATER COMPANY

Population 1910 census, 322; increase since 1910, 13. Estimated 1915, 330b

LOCATION

Eastern Susquehanna County, near headwaters of Starrucca Creek, a tributary of North Branch of Susquehanna River; 15 miles south of Susquehanna Borough, on Jefferson Division of Erie R. R.

INDUSTRIES

Agricultural community; Bordens Condensed Milk Plant.

WATER SUPPLY

Thompson Borough Water Co., incorporated 1891.

SOURCE AND COLLECTION

Two springs in adjacent hills; one 0.25 mile northwest and other 0.5 south of borough. Water soft. First spring, estimated minimum yield 24,000 gallons per day; normally discharges by gravity into

circular covered reservoir, 14,000 gallons capacity, at elevation of over 100 feet above town. In dry season, when water level falls below outlet, water pumped out by wind or gasoline power. South spring, estimated minumum yield 12,000 gallons per day.

DISTRIBUTION

By gravity from distributing reservoir and from South spring. Pressure in center of borough about 50 pounds. Total length of distributing pipes about 1 mile, of which 4-inch and 3-inch constitute 1,000 feet each, remainder 2-inch; 5 fire hydrants.

CONSUMPTION

About 180 people supplied through 50 taps. Average daily consumption believed to be about 3,600 gallons.

TIOGA BOROUGH, TIOGA COUNTY

TIOGA WATER WORKS COMPANY

Population 1910, 533; increase since 1900, 9. Estimated 1915, 540b

LOCATION

Northeastern Tioga County, on Tioga River and Erie and New York Central railroads.

INDUSTRIES

Farming community; Tioga tannery of Elk Tanning Co.

WATER SUPPLY

Original supply since 1874, when a private system was installed, incorporated in 1887 as Tioga Water Works Co.

SOURCE AND COLLECTION

A mountain stream, tributary to Taylor Run, on which is 2,000,000 gallon reservoir about 1 mile east of borough. Water passes through sand and gravel filter, discharging into 1,000,000 gallon reservoir on a hill 0.5 mile east of borough at elevation 210 above same.

Auxiliary pumping plant for emergencies in eastern part of borough, 100 feet west of Tioga River; takes water from a well 18 feet deep, yield approximately 50,000 gallons per day. A Knowles duplex pump forces the water through 4-inch main into distributing pipes. Pressure at pump 60 pounds. Water soft.

DISTRIBUTION

Distributing mains divided according to size as follows: 6-inch, 1.5 miles; 5-inch, small amount; 3-inch, 2.0 miles, total, 3.5 miles; 15 fire hydrants, about half 4-inch and half 6-inch.

CONSUMPTION

Average daily consumption about 40,000 gallons, all domestic. Estimated population supplied, 360.

TOWANDA AND MONROE BOROUGHS, SOUTH AND NORTH TOWANDA (TOWANDA AND NORTH TOWANDA TWPS.), BRADFORD COUNTY

TOWANDA WATER WORKS COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Towanda,	4,281	*382	4,100b
Monroe (P. O. Monroeton),	403	18	400a
South Towanda,			300
North Towanda,			125

*Decrease.

LOCATION

Towanda, center and seat of Bradford County, on North Branch of Susquehanna River, midway between mouths of Towanda and Sugar Creeks; Monroe about 4 miles south; on Lehigh Valley R. R., Bowman's Creek Branch, and on Susquehanna & New York R. R. On steep hillside along river, which is flanked on both sides by mountains.

INDUSTRIES

Farming region, tobacco raising and dairying; two silk mills, top factory, furniture factory, two machine shops, hay chopping and baling plant.

WATER SUPPLY

Towanda Water Works Co., incorporated 1879 for Towanda Borough, Bradford County.

SOURCE AND COLLECTION

(1) Main source of supply Eilenberger Spring, rising at a considerable elevation, 17 miles south of Towanda in Albany Township, near headwaters of South Branch of Towanda Creek; 27 acres in vicinity of spring owned by company on watershed of 10 square miles. Estimated minimum yield 500,000 gallons per day, flow being greater in winter and spring. Water piped from spring to small covered concrete basin nearby through 12-inch open joint tile pipe.

(2) In case of shortage from Eilenberger Spring and Satterlee Run, water may be diverted from south branch of Towanda Creek (which is fed from a number of neighboring springs), passing through an intermediate bed of sand and gravel; also, water may be collected from adjacent spring ground by means of open joint tile pipes feeding into 12-inch pipe from spring to concrete basin.

(3) Satterlee Run, a small tributary entering south branch of Towanda Creek, 9 miles below Eilenberger Spring; 8-inch pipe discharges from intake to 10-inch line from Eilenberger Spring.

(4) Springs in ravine on hillside about 0.25 mile west of Towanda, fed into 14,000,000 gallon reservoir, said to be used only for fire purposes; also, near reservoir are wells, capacity 70,000 gallons per day, from which water is pumped when needed.

PROSPECTIVE ADDITIONAL SUPPLY

Plans filed in March and April, 1914, with Department of Health and Water Supply Commission for earth dam to provide for storage reservoir of 29,000,000 gallons capacity, near site of present intake.

DISTRIBUTION

A 10-inch main, 17 miles long, from concrete basin near Eilenberger Spring to borough, with 8-inch from Satterlee Run entering 9 miles below. Water backs up into two reservoirs, one of 150,000 gallons capacity on hill southwest of borough, at elevation about 250 feet above lowest point in system, in district known as South Towanda,

connected by 10-inch main. From this, 12-inch main extends into borough and again connects with main line. Second reservoir, 14,000,000 gallons capacity, on a hill about 0.75 mile west of borough, at elevation 275 feet above same, connected by 8-inch line; said to be used only for fire purposes. Pressures in borough 22 to 115 pounds, according to elevation. A reducing valve in main supply pipe prevents excessive pressures due to head at source. Distributing mains (exclusive of about 16 miles of supply main), as follows:

Size (inches),	12	10	8	6	4	2 to ¾	Total
Length (miles),	0.71	0.66	0.93	3.06	1.08	3.03	9.47
Per cent.,	7.5	7.0	9.8	32.3	11.7	32.0	100

Sixty-nine fire hydrants, 6-inch.

CONSUMPTION

Practically entire population supplied; 1,150 taps, 40 in Monroe, 20 in South Towanda and 15 in North Towanda. Large consumers such as hotels, livery stables, etc., metered; total number of meters 28. Average daily consumption estimated at 600,000 gallons to 800,000 gallons per day, about 75% domestic. No means of accurate measurement.

HISTORICAL

Original water supply in borough furnished by Towanda Gas and Water Co., incorporated April 13, 1859, pumping from Susquehanna River. The Towanda Water Works Co., incorporated 1879 for Towanda Borough and vicinity, purchased water works of old company in 1880, and gas company operated separately under old charter. New company operated pumping station until 1891, when it was abandoned and a new source of supply secured.

TROY BOROUGH, BRADFORD COUNTY

MUNICIPAL WATER WORKS

Population 1910, 1,288; decrease since 1900, 162. Estimated 1915 population, 1,200b

LOCATION

Western Bradford County, at junction of South Creek with Sugar Creek, and on Northern Central Division of Pennsylvania R. R.

INDUSTRIES

Farming community; tannery, creamery, engine works and machine works.

WATER SUPPLY

Municipal system. Original works constructed in 1880 and operated by Troy Water Co., Bradford, Pa. In 1893 borough constructed independent plant and thereafter both systems operated until October 1902, when borough acquired company's works.

SOURCE AND COLLECTION

Entire supply from same general territory across railroad and creek, westerly and southwesterly from borough center and from 0.75 to 2 miles distant therefrom. Water medium hard.

Principal source of supply developed by borough in 1893 consists of: (1) A number of springs rising near West Branch of Sugar creek, 2 miles west of borough; (2) two drilled wells which overflow into collecting well of springs; (3) from 8-inch collecting pipe buried under West Branch of Sugar Creek, directly north of springs and feeding said collecting well. Water from these sources treated with hypochlorite of lime applied at point of entrance to distributing reservoir and used temporarily until a proposed new source of drilled wells is installed. An 8-inch line 1.5 miles long delivers to two connected distributing reservoirs, 430,000 gallons combined capacity, on hill about 0.5 mile west of borough. A 4-inch drilled well, 300 feet deep, also feeds reservoir by means of a pump of 86,000 gallons capacity. Yield of springs decreases considerably during dry seasons, estimated minimum being 90,000 gallons per day. At present new wells being drilled in effort to secure additional supply. If successful, a new 1,000,000 gallon reservoir will be constructed.

Auxiliary supply obtained from original system built by company used for some private consumers and Pennsylvania R. R. Co., from three springs, 1 mile southwest of borough, collected into small covered reservoir.

DISTRIBUTION

Principal source by gravity from distributing reservoirs through 6-inch main, to borough; average pressure 70 pounds. Auxiliary supply by gravity from reservoir through 8-inch main 1 mile long; about 30 pounds pressure. Total length of distributing mains estimated at 3 miles; 40 fire hydrants, one-third 6-inch, remainder 4-inch.

CONSUMPTION

Estimated population supplied, about 1,000. Estimated average daily consumption, 100,000 gallons, 80% domestic; maximum 125,000 gallons. No means of accurate measurement.

Tannery has supply from springs below source of old water company.

COST AND REVENUE

Total cost of works, $50,000; operating expenses, $500; gross revenue, $3,600.

TUNKHANNOCK BOROUGH, WYOMING COUNTY

TUNKHANNOCK WATER COMPANY

Population 1910 census, 1,598; decrease since 1900, 428; estimated 1915, 1,380b

LOCATION

Near center of Wyoming County, at mouth of Tunkhannock Creek; on main line Lehigh Valley R. R. and junction of Montrose Branch. Bounded on south by Tunkhannock Creek and Susquehanna River, and surrounded on other sides by hills and mountain ranges; flat land along creek rising to northwest; about 50 feet variation in elevations of built-up area.

INDUSTRIES

County seat; tannery of Elk Tanning Co., yarn mill and machine shop.

WATER SUPPLY

Tunkhannock Water Co., incorporated by special act in 1858, supplies estimated population of 500 outside borough limits.

SOURCE AND COLLECTION

Supply from two sources, springs and wells.

(1) Main and original source is several springs rising in ravine about 1 mile north of borough. Springs walled up, covered, and

water from part of them collected into reservoir of 200,000 gallons capacity; remainder feeds into delivery pipe below.

(2) Two wells in northerly corner of borough, one a driven well 346 feet deep, the other a dug well 46 feet deep; capacity of former estimated at 40,000 gallons per day, capacity of latter not available. Used intermittently at times of high consumption. Water tastes and smells slightly of sulphur.

DISTRIBUTION

By gravity from springs and pumping from wells. A 6-inch delivery main from reservoir at springs; some springs tapping into delivery main below reservoir. Water from wells pumped directly into distributing system by gasoline engine driven pump of 300,000 gallons per day capacity. A circular equalizing reservoir about 0.75 mile east of borough line connected by 8-inch main. Pressures 40 to 60 pounds, according to elevation.

Total length of distributing mains thought to be over 6 miles, two-thirds 4-inch and the remainder 8-inch, 6-inch, 2-inch, 1½-inch and 1-inch; 35 fire hydrants, 4-inch.

CONSUMPTION

Practically entire population supplied. No means of measuring consumption; based on information obtained in 1910, when per capita consumption was approximately 80 gallons per day, present consumption would be approximately 200,000 gallons.

WESTFIELD BOROUGH, TIOGA COUNTY

MUNICIPAL WATER WORKS

Population 1910, 1,207; increase since 1900, 27. Estimated 1915, 1,300

LOCATION

Northern Tioga County, on Cowanesque River, and on New York Central and Buffalo & Susquehanna railroads. Occupies flat lands along river, with about 40 feet variation in elevation of occupied sections; abrupt high hills rise close by on both sides of river.

INDUSTRIES

Farming community; milling, condensed milk factory and fire escape factory.

WATER SUPPLY

Municipal system installed in 1893.

SOURCE AND COLLECTION

From four springs, three about 2 miles northwest and one 2.25 miles southeast of borough; flow decreases considerably in summer. Combined dry weather flow estimated at 66,000 gallons per day. Water piped into small concrete collecting basins, from which 5-inch and 3-inch pipes discharge by gravity into distributing system. A 50,000 gallon equalizing reservoir 0.25 mile south of center of borough connected to system by 10-inch main.

Auxiliary supply, used only in time of drought, taken from driven well 139 feet deep, capacity approximately 50,000 gallons per day.

DISTRIBUTION

By gravity, as explained above; pressures 60 to 90 pounds; 30 fire hydrants, six connected to 3-inch mains, balance to larger ones.

CONSUMPTION

No accurate method of estimating consumption; assumed to be at least 70,000 gallons per day, the dry weather flow of springs; probably more in extremely dry weather.

COST AND REVENUE

Total cost of works, about $30,000; annual operating expenses, $500; gross revenue, $2,500.

WYALUSING BOROUGH, BRADFORD COUNTY

WYALUSING WATER COMPANY

Population 1910 census 580; increase since 1900, 55. Estimated 1915, 580

LOCATION

Southeastern Bradford County, on North Branch of Susquehanna River, at mouth of Wyalusing Creek, and on main line of Lehigh Valley R. R.

INDUSTRIES

Center for farming and shipping milk; planing mill, grist mill, small foundry and machine shop.

WATER SUPPLY

Wyalusing Water Co., incorporated 1893; works put in operation a year later.

SOURCE AND COLLECTION

Stalford Creek, tributary of Wyalusing Creek, entering it from west about 1 mile above borough; intake about 0.5 mile above mouth consists of small box in stream. Storage reservoir, 1,000,000 gallons capacity, just below intake, about 110 feet above borough. Water medium hard.

DISTRIBUTION

By gravity through 8-inch main from reservoir to borough. A 4-inch main from intake runs through reservoir and connects with 8-inch main, reservoir storage being drawn on only when stream flow is insufficient. Pressure averages about 45 pounds. Distributing mains as follows:

Size (inches),	8	6	4	Total
Length (miles),	2.25	0.25	1	3.5
Per cent.,	64	7	29	100

Eleven fire hydrants.

CONSUMPTION

About 75% of population supplied; 178 taps. No means of measuring; assuming 70 gallons per capita would be about 30,000 gallons per day.

SECTION No. 5

SUSQUEHANNA RIVER

LOWER NORTH BRANCH SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

Table of Industrial Water Supplies (Coal Companies)

SECTION No. 5

SUSQUEHANNA RIVER, LOWER NORTH BRANCH SUB-BASIN

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section is in the northeastern part of Pennsylvania, east and south of Upper North Branch Sub-basin. It comprises an area of about 1,733 square miles, or 3.8% of the area of the State, and includes the greater part of Lackawanna, Luzerne and Columbia counties, together with small portions of Wayne, Susquehanna, Sullivan, Montour, Carbon, Lycoming, Schuylkill and Northumberland counties.

SURFACE CHARACTERISTICS

It covers the northeastern limits of the Allegheny Mountains, its surface being marked by high ridges with long narrow valleys, broadening out near the junction of the North and West branches of the Susquehanna River. The terminal moraine crosses this area in a northwest and southeast direction through Columbia and Luzerne counties. The narrow northeastern end is drained by the Lackawanna River, which empties into the North Branch of the Susquehanna at Pittston, below which the latter stream traverses the section centrally.

The most important tributaries are the Lackawanna River, Nescopeck, Fishing, Catawissa and Roaring creeks, the Lackawanna River and its tributaries being especially valuable.

POPULATION

The population in 1910 was somewhat less than 661,000, an increase of 32% since 1900, and averaging 375 per square mile. It is chiefly concentrated in two coal districts, the remaining area having a scattered population. The principal coal district lies in the Lackawanna and Wyoming valleys, and includes the cities of Carbondale, Scranton, Wilkes-Barre and Pittston, with a population of about

430,000 in 1910. Outside of these places are mining villages, many of which have a considerable population. The density of population of this district is about 1,700 per square mile.

The other coal district in Luzerne County around Hazleton consists of scattered mines and villages, averaging about 820 persons per square mile.

RESOURCES AND INDUSTRIES

The anthracite industry is by far the most important although there are many manufacturing plants in the cities and large boroughs. The principal anthracite measures lie in the Wyoming and Lackawanna valleys, from Shickshinny, in Luzerne County, about 52 miles in a northeasterly direction as far as Forest City, in Susquehanna County, with an average width of from 4 to 6 miles. The other coal district, in the southeastern portion of Luzerne County, consists of scattered mines on the plateaus near the headwaters of Catawissa and Nescopeck creeks. In the southwestern part, in Columbia, Montour and Northumberland counties, several large boroughs along the main river are the centers of a prosperous agricultural district.

WATER SUPPLY

A notable feature in the water supply situation in this district is the combination of most of the original chartered companies along the Lackawanna and Wyoming valleys, from Forest City to Nanticoke, 67 in number, into two large systems. These combinations have been effected through stock ownership and each system is, therefore, under one general control and management. They supply a thickly settled industrial district, with a population of about 520,000, in which coal mining is the principal industry. The works are operated in a number of distinct physical units, but generally linked together by trunk mains so as to minimize the possibility of interruptions or shortage of supply.

In this region the mines pollute the main streams and render them unfit for domestic use, and in consequence tributaries which are fit for such use are often developed at a high rate of storage. In the Hazleton coal field, however, the mines and population being in a high plateau region in which are headwaters of the streams, pollution from mine waste occurs near sources and their usefulness for water supplies is vastly more limited than in the former regions. This district, therefore, has great difficulty in securing an adequate supply, a large percentage coming from drilled wells. Most of the supplies are developed by coal companies that furnish water for domestic

as well as for industrial purposes. There are only a few scattered and small supplies outside of these coal districts.

North of Nanticoke, in the Wyoming and Lackawanna valleys, and along the southerly borders of the section, practically all available streams are utilized for water supply. In the remainder of the section, north of the Susquehanna and in the eastern end, there are numerous streams, little utilized, often because of pollution from mine or other waste.

The greatest consumption of water is in the coal regions in the Wyoming and Lackawanna valleys, north from Nanticoke to Forest City. The public supply from the Scranton Gas & Water Co., and the Spring Brook Water Supply Co., amounts to 93,000,000 gallons, or 82% of that of all public systems in the section. The intensity of consumption in this section is 72,000 gallons per square mile per day. The aggregate population served by water supply systems is about 757,000.

Another area of moderately high consumption is in the Schuylkill coal district. Many of the places therein, while situated in Sections 2 and 9, are described here because most of the water is taken from this drainage basin. Several large communities along the Susquehanna below Nanticoke use considerable water.

About one-third of all the systems use surface sources, one-third ground sources, and the remainder a combination of both. While systems pumping their supply are greatly in excess of those supplied by gravity, in amount the greater part is delivered by the latter means, the two large systems in the Lackawanna and Wyoming valleys being in the latter class. Hazleton, Shamokin, Mt. Carmel Township, Shenandoah, Centralia, Girard Estate and Mahanoy City, with territory in Sections 2 and 9, pump water over the divide from this section, the pumps of the latter system working against a pressure of 365 pounds.

Water for industrial uses is drawn almost entirely from public systems because of their extent and their control of most of the streams.

The following tables give a summary of the water supplies in this section, both domestic and industrial, and are followed by detailed descriptions of the water supply systems arranged alphabetically according to places supplied:

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 5

Place	County	Ownership or Control	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Beaver Brook,	Luzerne, Hazle Twp.,	Beaver Brook W. Co.,	750	750						1	
Benton,	Columbia,	Benton W. S. Co.,	750b	200			1				
Berwick,	Columbia,	Berwick W. Co.,	16,000	14,000			1				
East Berwick,	Luzerne, Salem Twp.,									—	
Nescopeck,	Luzerne,						—				
North Berwick,	Columbia, Briar Creek Twp.,									—	
West Berwick,	Columbia,						—				
Bloomsburg,	Columbia,	Bloomsburg W. Co.,	8,000	7,000			1				
Catawissa,	Columbia,	Catawissa W. Co.,	2,000	2,000			1				
Centralia,	Columbia,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.	4,200	4,200			1				
Aristes,	Columbia, Conyngham Twp.,									—	
Byrnesville,	Columbia, Conyngham Twp.,									—	
Wilburton,	Columbia, Conyngham Twp.,									—	
Chinchilla,	Lackawanna, S. Abington Twp.,	Chinchilla W. Co.,	300b	150						1	
		Private—W. C. Hall,		125							1
Conyngham,	Luzerne,	Conyngham W. Co.,	400b	400			1				
Dallas,	Luzerne,	Dallas W. Co.,	650	800			1				
		Private—B. W. Brickel,		125					1		
Danville,	Montour,	Municipal,	7,600	7,000				1			
Deep Run,	Luzerne, Black Creek Twp.,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.	190	190						1	
Gowen,										—	
Deringer,	Luzerne, Black Creek Twp.,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)	450	425						1	
Fern Glen,	Luzerne, Black Creek Twp.,									—	
Drifton,	Luzerne, Hazle & Foster Twps.,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)	2,518	2,518						1	
Buck Mountain,	Carbon, Lausanne Twp.,									—	
Eckley,	Luzerne, Foster Twp.,									—	
Freeland,	Luzerne,	Freeland W. Co.,	6,650b	6,650			1				
South Heberton,	Luzerne, Foster Twp.,									—	
Girard Estate,	Columbia and Schuylkill,	The Girard W. Co.,	12,000	12,000						1b	
Glen Summit,	Luzerne, Fairview Twp.,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)	25	350*						1	
Harwood,	Luzerne, Hazle Twp.,	Hazle Township W. Co.,	750b	750						1	

Hazleton,	Luzerne,	Diamond W. Co.,	28,000x	20,000	1						
West Hazleton,	Luzerne,		5,300				—				
Hazleton,	Luzerne,			16,000	1						
Hazleton Suburbs,	Luzerne,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)								—	
West Hazleton,	Luzerne,		800							—	
Jeanesville,	Luzerne, Hazle Twp.,		300								
Yorktown,	Carbon, Banks Twp.,	Moosic Mountain W. Co. (Bear Gap W. Co.)		250						1	
Jessup,	Lackawanna, Winton Twp.,	Kulpmont W. Co.,	3,000	3,000						1	
Kulpmont,	Northumberland, Mt. Carmel Twp.	Lansdown Park W. Co.,	15	15						1	
Lansdown Park,	Lackawanna, So. Abington Twp.,	Laurel Run W. Co.,	§				1				
Laurel Run,	Luzerne,	Mahanoy City W. Co.,	17,200	19,000			1				
Mahanoy City,	Schuylkill,	Marion Heights W. Co.,	1,600	1,600			1				
Mahanoy Twp. (part),	Schuylkill,	Honey Brook W. Co.,	6,300	6,300			1				
Marion Heights,	Northumberland,									—	
McAdoo,	Schuylkill,									—	
Audenreid,	Carbon, Banks Twp.,									—	
Honey Brook,	Schuylkill, Kline Twp.,	Millville W. Co.,	620b	400			1				
Trescow,	Carbon, Banks Twp.,	Moscow W. Co.,	1,200a	600			1				
Millville,	Columbia,	Northumberland W. Co.,	3,900b	3,800			1				
Moscow,	Lackawanna,	Private—T. A. Breisch,	750	100							1
Northumberland,	Northumberland,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)	1,000	1,000						1	
Nuremburg,	Luzerne & Schuylkill, N. Union Twp.	Ringtown Spring W. S. Co.,	750b	100			1				
Oneida,	Schuylkill, E. Union Twp.,	Scranton G. & W. Co.,	218,000	245,700	1††		††			††	
Ringtown,	Schuylkill,	City W. Co. of Scranton,		60	1						
Scranton, Carbondale & vicinity.	Lackawanna & Susquehanna,	The Roaring Creek W. Co.,	20,985x	35,000			1				
Shamokin,	Northumberland,		17,900b							1	
Coal Township (part),	Northumberland,	Municipal,	28,649x	20,000				1			
Shenandoah,	Schuylkill,	Shenandoah Citizens W. Co.,		5,000			1				
Shickshinny,	Luzerne,	Shickshinny W. Co.,	2,150b	1,800b			1				
Mocanaqua,	Luzerne, Conyngham Twp.,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)	500	425						—	
Tomhicken,	Luzerne, Sugar Loaf Twp.,	Citizens W. Co. of Wapwallopen,	150b	135						1	
Wapwallopen,	Luzerne, Conyngham Twp.,	Spring Brook W. S. Co.,	320,000	317,147	1†		1†			1	
Wilkes-Barre, Pittston & vicinity.	Luzerne & Lackawanna,									1†	

x—U. S. Census
*—Summer population
a—Estimated by water companies
b—Estimated by Water Supply Commission
§—Summer cottages
†—Includes 2 cities, 27 boroughs and 35 villages and parts of townships
††—Includes 2 cities, 11 boroughs and 3 villages and parts of townships
h—Supply furnished to 6 villages

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 5—*Continued*

Place	County	Ownership or Control	Supply: Source: Surf.	Supply: Source: Ground	Supply: Source: Comb.	Supply: Method: Grav.	Supply: Method: Pumped	Supply: Method: Comb.	Consumption (average daily): Domestic (gallons)	Industrial (gallons)	Total (gallons)	Per capita (gallons)
Beaver Brook,	Luzerne, Hazle Twp.,	Beaver Brook W. Co.,	---	1	---	---	1	---	15,000	240,000	255,000a	------
Benton,	Columbia,	Benton W. S. Co.,	---	1	---	---	1	---	6,000	----------	6,000b	------
Berwick,	Columbia,	Berwick W. Co.,	1	---	---	---	---	---	1,800,000	1,200,000	3,000,000	214t
East Berwick,	Luzerne, Salem Twp.,											
Nescopeck,	Luzerne,											
North Berwick,	Columbia, Briar Creek Twp.,											
West Berwick,	Columbia,											
Bloomsburg,	Columbia,	Bloomsburg W. Co.,	1	---	---	---	1	---	1,000,000	250,000	1,250,000	178t
Catawissa,	Columbia,	Catawissa W. Co.,	---	---	1	---	---	1	65,000a	15,000a	80,000a	------
Centralia,	Columbia,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.	---	---	1	---	---	1	82,000	553,000	635,000	151t
Aristes,	Columbia, Conyngham Twp.,											
Byrnesville,	Columbia, Conyngham Twp.,											
Wilburton,	Columbia, Conyngham Twp.,											
Chinchilla,	Lackawanna, S. Abington Twp.,	Chinchilla W. Co.,	---	1	---	---	1	---	4,500b	----------	4,500b	------
		Private—W. C. Hall,	---	1	---	1	---	---	6,500a	----------	6,500a	------
Conyngham,	Luzerne,	Conyngham W. Co.,	---	1	---	1	---	---	12,000b	----------	12,000b	------
Dallas,	Luzerne,	Dallas W. Co.,	---	1	---	1	---	---	15,000a	----------	15,000a	------
		Private—B. W. Brickel,	---	1	---	---	1	---	3,800b	----------	3,800b	------
Danville,	Montour,	Municipal,	1	---	---	---	1	---	720,000	80,000	800,000	114t
Deep Run,	Luzerne, Black Creek Twp.,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.	1	---	---	1	---	---	300a	5,700a	6,000a	------
Gowen,												
Deringer,	Luzerne, Black Creek Twp.,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)	---	---	1	---	---	1	8,500a	----------	8,500a	------
Fern Glen,	Luzerne, Black Creek Twp.,											
Drifton,	Luzerne, Hazle & Foster Twps.,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)	---	---	1	---	---	1	57,000	326,000	383,000	156t
Buck Mountain,	Carbon, Lausanne Twp.,		---	---	---	---	---	---	1,700	----------	1,700	
Eckley,	Luzerne, Foster Twp.,		---	---	---	---	---	---	8,000	157,000	165,000	
Freeland,	Luzerne,	Freeland W. Co.,	---	1	---	---	1	---	----------	----------	300,000	45t
South Heberton,	Luzerne, Foster Twp.,											
Girard Estate,	Columbia and Schuylkill,	The Girard W. Co.,	1	---	---	---	1	---	294,000	1,106,000	1,400,000	117t
Glen Summit,	Luzerne, Fairview Twp.,	Wyoming Valley W. S. Co (Lehigh Valley Coal Co.)	---	1	---	---	1	---	37,000	----------	37,000	106d

Harwood,	Luzerne, Hazle Twp.,	Hazle Township W. Co.,	‖		1			1			
Hazleton,	Luzerne,	Diamond W. Co.,			1			1	950,000	50,000	1,000,000	50t
West Hazleton,	Luzerne,										
Hazleton,	Luzerne,										
Hazleton Suburbs,	Luzerne,										
West Hazleton,	Luzerne,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)	1					1	370,000	150,000	520,000g	
Jeanesville,	Luzerne, Hazle Twp.,										
Yorktown,	Carbon, Banks Twp.,										
Jessup,	Lackawanna, Winton Twp.,	Moosic Mountain W. Co. (Bear Gap W. Co.)	1			1			5,000a	155,000a	160,000a	
Kulpmont,	Northumberland, Mt. Carmel Twp.	Kulpmont W. Co.,	1				1		42,300		42,300	14d
Lansdown Park,	Lackawanna, So. Abington Twp.,	Lansdown Park W. Co.,		1			1		500b		500b	
Laurel Run,	Luzerne,	Laurel Run W. Co.,	1	¶				1				
Mahanoy City,	Schuylkill,	Mahanoy City W. Co.,			1			1	1,600,000	400,000	2,000,000	105t
Mahanoy Twp. (part),	Schuylkill,											
Marion Heights,	Northumberland,	Marion Heights W. Co.,	1	**			1		31,000		31,000	19t
McAdoo,	Schuylkill,	Honey Brook W. Co.,	1				1		810,000	440,000	1,250,000	198t
Audenreid,	Carbon, Banks Twp.,											
Honey Brook,	Schuylkill, Kline Twp.,											
Trescow,	Carbon, Banks Twp.,											
Millville,	Columbia,	Millville W. Co.,			1			1	25,000		25,000	62d
Moscow,	Lackawanna,	Moscow W. Co.,	1			1			20,000b		20,000b	
Northumberland,	Northumberland,	Northumberland W. Co.,			1			1	114,000b		114,000b	
Nuremburg,	Luzerne & Schuylkill, N. Union Twp.	Private—T. A. Breisch,		1			1		1,500a		1,500a	
Oneida,	Schuylkill, E. Union Twp.,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)			1			1	20,000a	180,000a	200,000a	
Ringtown,	Schuylkill,	Ringtown Spring W. S. Co.,		1			1		2,000b		2,000b	
Scranton, Carbondale & vicinity.	Lackawanna & Susquehanna,	Scranton G. & W. Co.,			1			1	6,480,000	29,520,000	36,000,000	147t
Shamokin,	Northumberland,	City W. Co. of Scranton,		1			1		5,000a		5,000a	
Coal Township (part),	Northumberland,	The Roaring Creek W. Co.,	1					1	2,920,000a	1,580,000a	4,500,000a	
Shenandoah,	Schuylkill,	Municipal,			1			1	600,000b	900,000b	1,500,000a	
		Shenandoah Citizens W. Co.,			1	1			938,000a	312,000a	1,250,000a	
Shickshinny,	Luzerne,	Shickshinny W. Co.,	1			1			25,000a	75,000a	100,000a	
Mocanaqua,	Luzerne, Conyngham Twp.,											
Tomhicken,	Luzerne, Sugar Loaf Twp.,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)			1			1	4,500a	1,500a	6,000a	
Wapwallopen,	Luzerne, Conyngham Twp.,	Citizens W. Co. of Wapwallopen,		1		1			4,000b		4,000b	
Wilkes-Barre, Pittston & vicinity.	Luzerne & Lackawanna,	Spring Brook W. S. Co.,	1					1			56,456,000	141t

a—Estimated by water companies
b—Estimated by Water Supply Commission
d—Domestic
t—Total
‖—Wyoming Val. W. S. Co. (Included in Hazleton.)
¶—Spring Brook Water Supply Co.
**—Bear Gap Water Co.
g—See section No. 2 for 85% of total consumption

RAILROAD WATER SUPPLIES, SECTION NO. 5

BLOOMSBURG & SULLIVAN

Station	Source of Supply	Method of Supply	Avg. daily consumption	
			R. R.	Public
Bloomsburg,	Bloomsburg W. Co.,			7,300
Stillwater,	Spring,	Gravity,	8,000	
Laubachs,	Spring,	Gravity,	2,900	

CENTRAL RAILROAD OF NEW JERSEY

Bergers,	Run,	Gravity,	45,000	
Penobscot,	Creek,	Gravity,	150,000	
Mile Post No. 156,	Spg. Brk. W. Co.,			17,500
Laurel Run,	Spg. Brk. W. Co.,	Out of service.		(55,000)
Ashley,	Spg. Brk. W. Co.,			250,000
Wilkes-Barre,	Spg. Brk. W. Co.,			30,000
Scranton,	Scranton W. Co.,			50,000
Wanamie,	Spg. Brk. W. Co.,			20,000
Lee,	Creek,	Gravity,	18,000	
Plymouth,	Plymouth W. Co.,			20,000

DELAWARE & HUDSON

Hathaway Pond,	Plant owned by Erie R. R.,			
"Erie" Carbondale,	Plant owned by Erie R. R.,			
Forest City,	Plant owned by Erie R. R.,			
Uniondale,	Plant owned by Erie R. R.,			
Carbondale Yard,	Consol. W. Co.,	Gravity,		180,000
Carbondale Sta.,	Consol. W. Co.,	Gravity,		25,000
Archbald,	Creek,	Gravity,	12,500	
Olyphant,	Olyphant W. Co.,	Gravity,		150,000
Green Ridge,	Spg. Brk. W. S. Co.,	Gravity,		112,000
Moosic,	Spg. Brk. W. S. Co.,	Gravity,		62,000
Wilkes-Barre,	Spg. Brk. W. S. Co.,	Gravity,		112,500
Plymouth Jct.,	Spg. Brk. W. S. Co.,	Gravity,		17,500
Kingston Hill,	Spg. Brk. W. S. Co.,	Gravity,		5,000
Hudson,	Spg. Brk. W. S. Co.,	Gravity,		62,500
Racket Brook,	Spg. Brk. W. S. Co.,	Gravity,		5,000
Farview,	Creek,	Gravity,	5,000	

DELAWARE, LACKAWANNA & WESTERN

Moscow,	Moscow W. Co.,			72,000
Luzerne,	Spg. Brk. W. S. Co.,			100
Wilkes-Barre office,	Spg. Brk. W. S. Co.,			100
Kingston,	Spg. Brk. W. S. Co.,			140,000
Plymouth,	Plymouth W. Co.,			700
Avondale, engines,	Mountain stream,	Gravity,	16,400	
Bliss, engines,	Spg. Brk. W. S. Co.,			17,100
W. Nanticoke,	Nanticoke W. Co.,			50
Shickshinny,	Shickshinny W. Co.,			1,800
Beach Haven,	Brook,	Gravity,	1,300	
Berwick Sta.,	Berwick W. Co.,			300
Bloomsburg,	Bloomsburg W. Co.,			13,400
Danville,	Borough,			16,100
Northumberland,	Northumberland W. Co.,			33,500
Elmhurst,	Sand Spg. Creek,	Gravity,	10	
	Scranton G. & W. Co.,			131,800
Nay Aug,	Scranton G. & W. Co.,			13,200
Scranton Shops,	Keiser Creek,	Gravity,	65,800	
Scranton Shops,	Scranton G. & W. Co., }			202,000
Scranton Shops,	Spring Brook W. Co., }			
Taylor,	Spring Brook W. S. Co.,			48,000
Old Forge,	N. Mountain W. Co.,			100
Susq. Ave.,	Spring Brk. W. S. Co.,			13,900
W. Pittston,	Spring Brk. W. S. Co.,			50
Wyoming,	Spring Brk. W. S. Co.,			70

RAILROAD WATER SUPPLIES, SECTION NO. 5

ERIE

Station	Source of supply	Method of supply	Avg. daily consumption R. R.	Avg. daily consumption Public
N. Y., Susquehanna & Western Division				
Langons,	Creek,	Gravity,		
	Well,	Pumped,	56,700	
Susq. Conn.,	Creek,	Gravity,	26,300	
Moosic,	Spg. Brk. W. S. Co.,			24,700
Jefferson Division				
Hathaways,	Springs,	Pumped,	50,000	
Uniondale,	Lewis Lake,	Gravity,	300,000	
Forest City,	Consol. W. S. Co. of Forest City.			50,000
Carbondale,	Belmont W. Co.,			100,000
Wyoming Division				
Jessup,	Scranton G. & W. Co.,			25,000
Gypsy Grove,	Scranton G. & W. Co.,			50,000
Rock Jct.,	Roaring Brk.,	Pumped,	350,000	
Dunmore,	Scranton G. & W. Co.,			200,000
Avoca,	Spring Brk. W. S. Co.,			250,000
No. 7 Jct.,	Spring Brk. W. S. Co.,			30,000

LEHIGH VALLEY

Station	Source of supply	Method of supply	Avg. daily consumption R. R.	Avg. daily consumption Public
Bear Creek Br.				
Mountain Cut-off,	Mill Creek, / Spr. Brook W. S. Co.,	Pumped, (emergency)		
Deep Hollow,	Deep Hollow Run,	Gravity,	100,000	
Gardners Run,	Gardners Run,	Gravity,	63,600	
Bowmans Cr. Br.				
Alderson,	Harvey's Lake,		30,000	
Luzerne,	Spring Brk. W. Co.,			11,000
Wyoming Division				
Nescopeck,	Run,	Gravity,	10,000	
Grassdale,	Crystal Spg. W. Co.,	Gravity,		130,000
Fairview,	Crystal Spg. W. Co.,	Gravity,		50,000
Espy Run,	Leuders Creek,	Gravity,	12,500	
Wilkes-Barre,	Lehigh V. Coal Co.,		49,200	
Wilkes-Barre,	Spg. Brk. W. Co.,			9,200
Wilkes-Barre Shops,	Lehigh V. Coal Co.,		250,000	
Port Bowkley,	Lehigh V. Coal Co.,		82,600	
Mahanoy & Hazleton Division				
Hazleton Shops,	Wyoming V. W. S. Co.,			237,000
Hazleton Sta.,	Wyoming Val. W. S. Co.,			90,000
Conyngham,	Springs,	Pumped,	30,000	
Gum Run,	Wyoming Val. W. S. Co.,			17,000
Long Run,	Diamond W. Co.,			35,000
Vexit Jct.,	Creek,	Gravity,	10,000	
Drifton,	Wyoming Val. W. S. Co.,			10,000

NEW YORK, ONTARIO & WESTERN

Station	Source of supply	Method of supply	Avg. daily consumption R. R.	Avg. daily consumption Public
Olyphant,	Olyphant W. Co.,			23,000
Scranton,	Scranton G. & W. Co.,			23,000
Cayuga Jct. (Scranton, Capouse Branch)	Scranton G. & W. Co.,			8,000
Forest City,	Brace Brook,	Gravity,	40,000	
	Consol. W. Co.,			
Carbondale,	Belmont W. Co.,			80,000
Mayfield Yard,	Anthracite Val. W. Co., / Consol. W. Co.,			200,000

RAILROAD WATER SUPPLIES, SECTION NO. 5

PHILADELPHIA & READING

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Shamokin Division				
Mausdale,	Mahoning Creek,	Pumped,	60,000	
Catawissa,	Susquehanna River,	Pumped,	175,000	
Mainville,	Stream,	Gravity,	78,000	
Beaver Valley,	Cranberry Run,	Gravity,		
	Beaver Valley Stream,	Gravity,	200,000	
Ferndale,	Stream,	Gravity,	24,000	
Brandonville,	Stream,	Gravity,	218,000	

PENNSYLVANIA

Sunbury & Shamokin Divisions				
S. Danville,	Susq. River,	Pumped,	20,800	
Catawissa,	Springs,	Gravity,	39,400	
Creasy,	Susq. River,	Pumped,	17,000	
Nescopeck,	Nescopeck W. Co.,			29,000
Port,	Run,	Gravity,	67,800	
Pond Hill,	Run,	Gravity,	7,700	
Honey Pot,	N. Mt. W. Co.,			74,900
L. & S. Jct.,	N. Mt. W. Co.,			17,700
Nanticoke,	N. Mt. W. Co.,			
Wilkes-Barre,	Spg. Brk. W. Co.,			12,600
Mifflin X Roads,	Springs,	Gravity,	10,300	
Tank,	Springs Run,	Gravity,	8,600	
Rock Glen Jct.,	Falls Run,	Gravity,	21,200	
Hazleton,	Wyoming Val. W. S. Co.,			4,100

LACKAWANNA & WYOMING VALLEY

Scranton Term.,	Scranton G. & W. Co.,			3,100
Scranton Power Sta. & Shops.	Scranton G. & W. Co.,			121,300
Avoca,	Spg. Brk. W. S. Co.,			
Pittston,	Spg. Brk. W. S. Co.,			900
Inkerman,	Spg. Brk. W. S. Co.,			
Plains,	Spg. Brk. W. S. Co.,			
Wilkes-Barre,	Spg. Brk. W. S. Co.,			3,600

SUSQUEHANNA, BLOOMSBURG & BERWICK

Eyersgrove Jct.,	Little Fishing Creek,	Pumping,	23,800	
Berwick,	Berwick Water Co.,			50,000
Totals,			2,756,410	3,800,770

INDUSTRIAL WATER SUPPLIES, SECTION NO. 5 (COAL MINING COMPANIES)

Does not Include all the Smaller Companies

Place	Company	Source	Method	Industrial consumption (gallons per day)	Daily amount of product	Ret'd to stream (%)	Increase in temp. °F.
Danville, Montour County,	Reading Iron Co., Montour Rolling Mills, Danville Puddle Mill,	Mahoning Creek,	Pumped,	s1,200,000	150 tons muck bars. 150 tons steel	66	0
Jamison City, Columbia & Sullivan Co's.	Elk Tanning Co., Columbia Tannery.	See Jamison City Village, Sec. No. 5.		300,000			
Kingston Station, Luzerne County,	The Bartels Brewing Co.,	Spg. Brk. W. S. Co.,		(142,000)	373 bbls.	0	0
Shamokin, Northumberland County,	Fuhrman & Schmidt Brewing Co., Inc.	Eagle Run,	Gravity,	124,000	143 bbls.	0	0
		Well,	Pumped,				
		Roaring Creek W. Co.,		(13,700)	5 tons ice		
		Roaring Creek W. Co.,		(22,000)	76 bbls. 6 tons ice		
Wilkes-Barre, Luzerne County,	Hazard Mfg. Co. (wire rope & cables).	Spg. Brk. W. S. Co.,		(49,300)	27 tons		
	Sheldon Axle Co.,	Spg. Brk. W. S. Co.,		(251,000)			0
	Stegmaier Brewing Co.,	Spg. Brk. W. S. Co.,		(200,000)	630 bbls.	80	Yes
Total from private systems,				1,624,000			

s Water for steam purposes

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product, short tons	Number of collieries supplied
				Domestic	Industrial		
Columbia County—							
Wilburton,	Midvalley Coal Co.,	Wyoming Val. W. S. Co.,		(8,000)	s (90,000)	1,424	1
Lackawanna County—							
Archbald,	Archbald Coal Co.,	Indian Cave Creek,			s 50,000	522	1
		Spruce Swamp Creek,	Gravity, 1,500,000 gal. reservoir.		w 30,000		
		Spring Hill Creek,					
		Olyphant W. Co.,			w (1,400)		
Blakely,	The Lackawanna Coal Co., Ltd.,	Hulls Creek,	Gravity, 100,000 gallon reservoir.		s 188,200	1,247	1
		Olyphant W. Co.,			(2,600)		
Carbondale,	Temple Coal Co.,	Lackawanna River,			s 52,000	700	1
		Carbondale W. Co.,			s (3,400)		
Capouse Colliery,	Scranton Coal Co.,	Scranton G. & W. Co.,			s(105,240)	1,192	1
Dunmore,	Carney & Brown Coal Co.,	Scranton G. & W. Co.,			(2,500)	144	1
	Green Ridge Coal Co.,	Scranton G. & W. Co.,			s (31,900)	535	1
	The Spencer Coal Co.,	Roaring Brook,	Pumped,		175,000	300	1
	Nay Aug Coal Co.,	Roaring Brook,	Pumped 250,000 gal. reservoir.		w 84,000	275	1
	Pennsylvania Coal Co.,	Scranton G. & W. Co.,			*(5,300 hp.)	3,393	3
Johnson Colliery,	Scranton Coal Co.,	Scranton G. & W. Co.,			s(283,240)	1,630	1
		Priceburg W. Co.,					
Jermyn,	West Mountain Coal Co.,	Scranton G. & W. Co.,			s (1,800)	74	1
Jessup,	The Dolph Coal Co., Ltd.,	Byron Creek,	250,000 gal. reservoirs.		*(2,320 hp.)	691	1
		Small streams,					
	Humbert Coal Co.,	Grassy Island Creek,			w		
		Olyphant W. Co.,			s (1,000)	362	1
	Temple Coal Co.,	Olyphant W. Co.,			(208,540)	1,750	1
Moosic,	Moosic Coal Co.,	Spring Brook W. S. Co.,			*(60 hp.)	10	1
	Pennsylvania Coal Co.,	Spring Brook W. S. Co.,			*(5,300 hp.)	4,188	2
	Hillside Coal & Iron Co.,	Spring Brook W. S. Co.,			*(2,500 hp.)	1,740	2

		Scranton G. & W. Co.,			s (81,560)	1,000	1
Mt. Pleasant Col.,	Scranton Coal Co.,	Small stream,	40,000 gallon reservoir.	500 (25 pop.)	3,000	60	1
Old Forge,	The Lehigh Valley Coal Co.,	Little Roaring Brook, Scranton G. & W. Co. (aux.)	Gravity,	(450 pop.)	*(825 hp.)	977	1
Olyphant,	Moosic Mountain Coal Co.,	Tinklepaugh Creek,	Gravity,		s 200,000	1,550	1
Ontario Colliery,	Scranton Coal Co.,	Scranton G. & W. Co.,			s(137,700)	2,165	1
Pine Brook Colliery,	Scranton Coal Co.,	Br. of Tinklepaugh Creek,	Gravity,		s 103,620	1,088	1
Raymond Colliery,	Scranton Coal Co.,	Scranton G. & W. Co.,			s (66,930)	683	1
Richmond No. 3 Col.,	Scranton Coal Co.,	Scranton G. & W. Co.,			s (65,900)	464	1
Riverside Colliery,	Scranton Coal Co.,	Scranton G. & W. Co.,			s(161,000)	639	1
Scranton,	Peoples Coal Co.,	Spring Brook W. S. Co.,			s(121,000)	1,968	2
	Jermyn & Co.,	Spring Brook W. S. Co.,			s (30,000)	410	1
	Traders Coal Co.,	Scranton G. & W. Co.,			(12,240)	136	1
	Bulls Head Coal Co.,	Continental Creek,	100,000 gallon reservoir.	9,500	s 600,000	5,000	7
Taylor & Scranton,	D. L. & W. R. R., Coal Mining Department.	Archbald Creek,	150,000 gal. res. gravity.	4,500 (370 pop.)	s 98,000	2,386	1
Taylor,	D. L. & W. R. R. Coal Mining Department.	St. Johns Creek,	75,600 gal. res. gravity.	7,700 (400 pop.)	s 104,000	1,828	1
West Ridge Colliery,	Scranton Coal Co.,	Scranton G. & W. Co.,			(48,750)	474	1
Luzerne County—							
Alden Station,	Alden Coal Co.,	2 drilled wells,	Air lift to 100,000 gal. res.	25,000	s 135,000	1,508	1
Avondale,	George F. Lee Coal Co.,	Spring Brook W. S. Co.,			*(310 hp.)	405	1
Conyngham,	Hazle Mountain Coal Co.,	2 drilled wells,	Pumped to tanks 15,000 gallon.		20,000	528	1
Cranberry,	A. Pardee & Co.,	(See Crystal Ridge, etc., Sec. No. 5.)		10,000 (100 pop.)	340,000	2,120	1
Ebervale (Nos. 1 & 3),	G. B. Markle Co.,	Springs,	Gravity to reservoirs.	See "K" Jeddo	Not given	-------	----
Forty Fort,	The Forty Fort Coal Co.,	Spring Brook W. S. Co.,			s(135,000)	1,222	1
Glen Lyon,	Susquehanna Coal Co. (Col. 6),	Spring Brook W. S. Co.,			s(287,700)	2,470	1
Harwood,	Harwood Coal Co.,	Wyoming Valley W. S. Co.,		(20,000)	s(8,000)	770	1
Harleigh,	Harleigh-Brookwood Coal Co.,	Drilled wells,	20,000 gal. res.,		s 10,000	436	1
Harleigh (Jeddo No. 7),	G. B. Markle Co.,	Diamond Water Co., From Ebervale No. 1 & 3 Collieries,		See "K" Jeddo	Not given	-------	----
Highland (Nos. 1, 2 & 5).	G. B. Markle Co.,	Drilled wells,	Air lift, &c.,	See "K" Jeddo	Not given	-------	----
Jeddo (No. 4 Colliery),	G. B. Markle Co.,	Drilled wells,	Air lift to tower and pumped to tanks.	(3,500 pop. all places)	Not given	-------	----
Hudson,	Wilkes-Barre Colliery Co.,	Spring Brook W. S. Co.,			*(100 hp.)	214	1
Kingston,	The Kingston Coal Co.,	Spring Brook W. S. Co.,			*(7,650 hp.)	6,783	3

INDUSTRIAL WATER SUPPLIES, SECTION NO. 5 (COAL MINING COMPANIES)—Continued

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product, short tons	Number of collieries supplied
				Domestic	Industrial		
Lattimer,	Wolf Coal Co.,	Drilled well,	Pumped to 22,000 gallon reservoir.		s 40,000	25	1
	Pardee Bros. & Co., Inc.,	Drilled wells,	Gravity from reservoirs.	292,000 (3,000 pop.)	s 438,000	2,215	1
Luzerne,	The Raub Coal Co.,	Toby's Creek,	Pumped,		w 126,000 s 92,000	556	1
	The Plymouth Coal Co., (Black Diamond Coal Co.)	Toby's Creek,	Pumped to 20,000 gal. tank.	500	w 150,000 s 660,000	717	1
	The Forty Fort Coal Co., "Harry E. Colliery."	Spring Brook W. S. Co.,			s(110,300)	1,268	1
Mocanaqua,	West End Coal Co.,	Shickshinny W. Co.,			*(3,300 hp.)	2,720	1
		Susquehanna River,	Pumped,				
Nanticoke,	D. L. & W. Coal Min. Dept.,	Shickshinny Creek,	Pumped,				
	Susquehanna Coal Co., Colliery No. 5.	Susquehanna River,			265,000		
		Spring Brook W. S. Co.,			s(417,600)	1,953	1
	Susquehanna Coal Co., Coll. No. 7 and washery.	Spring Brook W. S. Co.,			s(354,500)	2,568	2
Parsons,	The Lehigh Valley Coal Co.,	Susquehanna River,	Pumped to 500,000 gallon reservoir.		225,000	1,232	1
Pittston,	Hillside Coal & Iron Co.,	Spring Brook W. S. Co.,			*(3,610 hp.)	2,235	1
	Pennsylvania Coal Co.,	Spring Brook W. S. Co.,			*(16,056 hp.)	11,293	5
Plains,	Rissinger Bros. & Co., Inc.,	Spring Brook W. S. Co.,			s(10,000)	216	1
Plains Township,	The Lehigh Valley Coal Co., Henry Colliery.	Susquehanna River,	Pumped to 75,000 gallon reservoir.		225,000	2,050	1
	Prospect Colliery,	Susquehanna River,	Pumped to 1,500,000 gallon reservoir.		400,000	1,790	1
Plymouth,	The Plymouth Coal Co., Dodson Colliery.	Susquehanna River,	Pumped to 25,000 gallon tank.		w 228,500 s 685,000 (73,000)	818	1
		Spring Brook W. S. Co.,					

Pringle,	The East Boston Coal Co.,	Toby's Creek,	Pumped,		115,200	916	1
Shickshinny,	E. E. Stackhouse Coal Co.,	Rocky Run Creek,	Gravity from small reservoirs.		w 40,000 s 200	284	1
Sugar Notch,	Pittston Coal Mining Co.,	Paddy Run Creek,			*(550 hp.)	245	1
Warrior Run,	The Lehigh Valley Coal Co.,	Spring Brook W. S. Co.,					
		Warrior's Run,	Gravity to 300,000 gal. res.	20,000 (200 pop.)	200,000	656	1
West Pittston,	The Lehigh Valley Coal Co.,	Small stream,	50,000 gallon reservoir.		s 110,000	594	1
West Wyoming,	The Lehigh Valley Coal Co.,	Small stream,	Gravity 40,000 gal. reservoir.		90,000	933	1
Wilkes-Barre,	The Lehigh Valley Coal Co.,	Susquehanna River,	Pumped to 750,000 gal. res.		225,000	2,130	1
Wilkes-Barre,	Lehigh & Wilkes-Barre Coal Co.:						
	Hollenbach Colliery,						
	Stanton Colliery,						
	South Wilkes-Barre Colliery,						
Ashley,	Maxwell Colliery,						
Sugar Notch,	Sugar Notch Colliery,						
Wanamie,	Wanamie Colliery,						
Hanover Township,	Buttonwood Colliery,	Water companies,			(2,652,000)	23,798	13
	Inman Colliery,						
Plymouth,	Lance Colliery,						
	Parrish Colliery,						
	Nottingham Colliery,						
Audenreid,	Audenreid Colliery,						
	Honey Brook Colliery,						
Wilkes-Barre,	Wilkes-Barre Anthracite Coal Co.,	Spring Brook W. S. Co.,			s (97,400)	926	1
Wyoming,	The Mt. Lookout Coal Co.,	Spring Brook W. S. Co.,			s(229,700)	1,324	1
	Rissinger Bros. & Co., Inc., Troy Colliery.	Pond (owned by J. B. Whitlock).	Gravity,		s 10,000		
Yatesville,	McCauley Coal Co., Pickaway Colliery.	Well.	Pumped,		w 60,000	141	1
		Gardners Creek,	Gravity,		s 20,000	483	1
		Lamphole Creek.	Gravity,		w 19,200		
	Hillside Coal & Iron Co., Fernwood Colliery.	McCauley Coal Co.,					1
Northumberland County—							
Kulpmont,	Susquehanna Coal Co., Scott Colliery.	Bear Gap W. Co.,			s(104,800)	1,319	1
Marion Heights,	Greenough Red Ash Coal Co.,	Bear Gap W. Co.,			s (71,000)	990	1
Mt. Carmel,	Susquehanna Coal Co., Penn'a Colliery.	Bear Gap W. Co.,			(175,100)	1,622	1
	Richards Colliery,	Bear Gap W. Co.,			s(120,300)	1,403	1
Natalie,	Colonial Collieries Co.,	Bear Gap W. Co.,		(300)	s(123,100)	922	1
Shamokin,	Susquehanna Coal Co., Hickory Ridge Colliery & Washery	Bear Gap W. Co.,			s(221,400)	1,489	2
	Cameron Colliery,	Bear Gap W. Co.,			s(160,000)	1,800	1
	Luke Fidler Colliery,	Bear Gap W. Co.,			s(178,100)	893	1
	Shipman Coal Co.,	Bear Gap W. Co.,			s (70,100)	613	1
	Buck Ridge Coal Mining Co.,	Bear Gap W. Co.,			s (75,000)	433	1

INDUSTRIAL WATER SUPPLIES, SECTION NO. 5 (COAL MINING COMPANIES)—Continued

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product, short tons	Number of collieries supplied
				Domestic	Industrial		
Schuylkill County—							
Shenandoah,	Oxford Coal Co. (washery),	Girard W. Co.,			s (73,000)	30	1
Susquehanna County—							
Forest City,	Hillside Coal & Iron Co.,	Scranton G. & W. Co.,			*(3,450 hp.)	1,870	1
Total from private systems,				369,700	6,616,920		

* Capacity of boilers
s Water for steam purposes
w Water for washing coal

BEAVER BROOK (HAZLE TWP.), LUZERNE COUNTY

BEAVER BROOK WATER COMPANY
(Chas. M. Dodson & Co.)

Population 1915, 750a

LOCATION

Extreme southern Luzerne County, Hazle Township, near Carbon County line and 3 miles south of Hazleton; on Lehigh Valley R. R.

INDUSTRIES

Colliery of Chas. M. Dodson & Co., Dusky Diamond Colliery and colliery of T. R. Reese & Son.

WATER SUPPLY

Chas. M. Dodson & Co., coal operators, supply mine and village under charter of Beaver Brook Water Co., incorporated 1896 for Beaver Brock village.

SOURCE AND COLLECTION

Three drilled wells, Nos. 1, 2, and 4. Water pumped from No. 4 well about 1½ miles easterly to 60,000 gallon reservoir near wells Nos. 1 and 2, from which water is also pumped to reservoir, about 0.4 mile north of village and breaker and thence raised by 720,000 gallon pump to tank near reservoir.

DISTRIBUTION

By gravity to two storage tanks at boiler house near breaker, and to domestic supply of village.

CONSUMPTION

Supply to 750 people. Stated average daily consumption 255,000 gallons, 240,000 gallons for steam and industrial purposes and 15,000 gallons for domestic purposes. Of this, 5,000 gallons supplied to Dusky Diamond colliery.

BENTON BOROUGH, COLUMBIA COUNTY

BENTON WATER SUPPLY COMPANY

Population 1910 census, 719; increase since 1900, 84. Estimated 1915, 750b

LOCATION

In eastern Columbia County, on Fishing Creek.

INDUSTRIES

Planing mills, wagon works, shirt factory, fertilizer works, flour mill.

WATER SUPPLY

Benton Water Supply Co., incorporated 1900 as Benton Water Co. for Benton Borough. No work done on plant until 1911, when some property and franchise were purchased. Reorganized and name changed in 1913 to Benton Water Supply Co.

SOURCE AND COLLECTION

Spring of soft water about 60 feet from bank of West Creek, on opposite side from borough, and said to yield about 400,000 gallons per day. Water pumped by 1,000,000 gallon Smith-Vail triplex pump through 6-inch main to 134,000 gallon reservoir on hill above borough. System taken over from the Rohr-McHenry Distillery Co., which previously operated it for private supply.

DISTRIBUTION

By gravity from reservoir; 5 miles mains, one-half 6-inch, remainder 4-inch; 30 fire hydrants, 4-inch. Pressures, 60 to 100 pounds.

CONSUMPTION

About 40 families supplied through 70 taps. Average daily consumption, measured by pump displacement, 60,000 gallons, all domestic. Large consumers metered.

BERWICK, WEST BERWICK & NESCOPECK BOROUGHS, NORTH BERWICK (BRIAR CREEK TWP.), EAST BERWICK (SALEM TWP.), COLUMBIA AND LUZERNE COUNTIES

BERWICK WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Berwick borough,	5,357	1,441	
West Berwick borough,	5,512	(inc. 1902)	
Nescopeck borough,	1,578	478	
North Berwick village,	600		
East Berwick village,	1,000		
Total,	14,047		16,000

LOCATION

Berwick, West and North Berwick, in eastern Columbia County, at Luzerne County line, on flat land on north bank of Susquehanna River; on Delaware, Lackawanna & Western, and Susquehanna, Bloomsburg & Berwick railroads. Nescopeck directly opposite, on south bank of river, and on Pennsylvania R. R.

INDUSTRIES

The American Car and Foundry Works, furnishing employment to large proportion of inhabitants of surrounding communities; silk mills and shirt factory.

WATER SUPPLY

Berwick Water Co., incorporated by special act in 1818, for Berwick. Stockholders of this company own and operate following companies, all of which operate as one system:

Name	Inc.	Incorporated for
West Berwick Water Supply Co.,	1902	West Berwick
Briar Creek Water Supply Co.,	1904	Briar Creek Twp., Columbia County
Nescopeck Water Supply Co.,	1894	Nescopeck Twp., Luzerne County
West Salem Water Supply Co.,	1903	Salem Twp., Luzerne County

SOURCE AND COLLECTION

Three sources: (1) Varners Run, (2) Glen Brook, and (3) Susquehanna River and spring on its west bank.

(1) On Varners Run, 3,300,000 gallon reservoir 2 miles below source and 3 miles northeast of Berwick, at elevation 788; watershed area 2.6 square miles. Water soft.

(2) On Glen Brook, three storage reservoirs of 6,500,000, 19,400,000, and 33,800,000 gallons capacity about 2 miles north of center of borough, at elevations 758 and 776; watershed area about 2.8 square miles. Water soft.

(3) An intake in Susquehanna River. Water medium hard.

DISTRIBUTION

From (1) and (2) by gravity from Varners Run and Glen Brook lower reservoir to distributing system. A 10-inch main leads westward 2.5 miles to join the 12-inch, one of two mains (12-inch and 20-inch) from Glen Brook Reservoir to borough. A 6-inch main 1,300 feet long crosses river for supply of Nescopeck. Pressures average about 85 pounds in built-up sections; comparatively little difference in elevation.

Above is normal supply for domestic use and various industrial plants except American car and foundry plant, which is supplied through independent system of pipes with water from Susquehanna River. In seasons of drought this water is also turned into the other system.

(3) River water delivered to pump suction well from iron box chamber around spring and intake crib in river. Water pumped to 100,000 gallon sedimentation basin, flows through 1,500,000 gallon filters and is then pumped through 14-inch and 16-inch mains into system. Pumping equipment a 3,000,000 gallon Worthington compound condensing pump (used on the American Car and Foundry system), 1,500,000 gallon reciprocating steam pump and three centrifugal motor driven pumps (one 2,000,000 gallon Chalmers centrifugal, two 750,000 gallon Gould centrifugals), and two 100 hp. boilers.

A few taps in Salem Township supplied from main from Varners Run. Foundryville and North Berwick supplied from mains leading from Glen Brook to Berwick. Total length distributing mains, exclusive of 8 miles supply mains, 24 miles, about 75% being 4-inch and remainder principally 6-inch; 61 fire hydrants, 36 in Berwick and 25 in West Berwick, mostly 4-inch.

CONSUMPTION

Supply to 14,000 people; 2,800 taps. Total average daily consumption 2,000,000 to 3,000,000 gallons, according to extent of work at American car and foundry works; measured by meter, pump displacement and pitometer tests. From 700,000 to 1,200,000 gallons is indus-

trial, used principally in above-mentioned plant. Meters 125, all commercial and industrial. The company expects to begin installing meters for domestic consumers.

BLOOMSBURG TOWN, COLUMBIA COUNTY

BLOOMSBURG WATER COMPANY

Population 1910 census, 7,413; increase since 1900, 1,243. Estimated 1915, 8,000a

LOCATION

Eastern Columbia County, on flat land on north shore of North Branch of Susquehanna River, just above mouth of Fishing Creek; on Delaware, Lackawanna & Western, Philadelphia & Reading, and Bloomsburg & Sullivan railroads.

INDUSTRIES

Iron foundries, car and wheel works, woolen, silk, carpet and hosiery mills, match factory, brick works and brewery.

WATER SUPPLY

Bloomsburg Water Co., incorporated 1879 for town of Bloomsburg.

SOURCE AND COLLECTION

Fishing Creek, opposite northwest end of town. Water taken from creek to suction wells, pumped by 4,000,000 gallon DeLaval pump to 660,000 gallon subsidence basin, thence by gravity through mechanical filters of three wooden tank units of combined capacity of 3,000,000 gallons daily to 165,000 gallon clear well. From clear well water is pumped to group of three distributing reservoirs, two of 3,800,000 gallons combined capacity for the town and one of 500,000 gallons capacity for the State Normal School. Pumps for delivery of filtered water 3,250,000 gallon Knowles and 2,000,000 gallon Holly, the former being ordinarily in use for main supply and latter used only once weekly for Normal School. Filter plant installed 1901, after serious typhoid epidemic.

DISTRIBUTION

By gravity from distributing reservoirs; pressures 65 to 95 pounds, as follows:

Size (inches),	12	10	8	6	4	3	Total
Length (miles),	1.42	1.51	0.29	5.68	7.57	.09	16.56
Per cent.,	8.6	9.1	1.7	34.3	45.7	.06	100

Eighty-four fire hydrants with 3-inch barrels, half 6-inch and half 4-inch connection to mains.

CONSUMPTION

About 7,000 population supplied; 1,600 taps. Average daily consumption, by pump displacement, 1,250,000 gallons, or 174 gallons per capita; 80% domestic; maximum daily consumption 1,600,000 gallons.

CARBONDALE TOWNSHIP, LACKAWANNA COUNTY

(Mayfield Yard of New York, Ontario & Western R. R.)

ANTHRACITE VALLEY WATER COMPANY.

LOCATION

Northeastern Lackawanna County, Carbondale Township just north of Mayfield Borough, on Lackawanna River.

WATER SUPPLY

Anthracite Valley Water Co., incorporated 1904 for Carbondale Township.

SOURCE AND COLLECTION

Shove Creek, small tributary of Lackawanna River entering from west about 1 mile above Mayfield. Supplemented in dry weather by purchase from Consolidated Water Co. of Lackawanna Valley system.

Three storage reservoirs on creek, combined capacity of 17,000,000 gallons. From lowest of these water flows through stream bed into

distributing reservoir formed by masonry dam across stream bed. Flow into distributing reservoir regulated by valve in storage reservoir dam. Area of watershed about 0.5 square mile.

DISTRIBUTION

By gravity from distributing reservoir through 4-inch wrought iron pipe and in dry seasons also from connections with mains of Consolidated Water Co.

CONSUMPTION

Supply almost entirely industrial to railroad yard and shops. A few houses of employes in the yard also supplied. Average daily consumption 200,000 gallons.

CATAWISSA BOROUGH, COLUMBIA COUNTY

CATAWISSA WATER COMPANY

Population 1910 census, 1,930; decrease since 1900, 93. Estimated 1915, 2,000a

LOCATION

Southwestern Columbia County, at junction of Catawissa Creek with North Branch Susquehanna River; on Erie and Sunbury Divisions of Pennsylvania R. R., Shamokin Division of Philadelphia & Reading Ry., and Columbia & Montour Electric Ry.

INDUSTRIES

Agriculture; shoe factory and knitting mill; repair shops of Philadelphia & Reading Ry.

WATER SUPPLY

Catawissa Water Co., incorporated in 1882 for town of Catawissa. Works completed in 1885.

SOURCE AND COLLECTION

(1) Gensel Run, tributary to Catawissa Creek, east of borough and 1 mile above junction with Susquehanna River. Water from intake on run 1 mile east of borough and three springs nearby, flows by gravity through 4-inch pipe into a 300,000 gallon distributing reservoir on hill east of borough. Minimum flow 35,000 gallons daily.

(2) Auxiliary supply from four drilled wells, one 375 feet and three 150 feet deep, along Catawissa Creek, 0.5 mile east of borough. Water pumped by 300,000 gallon Platt pump through 4-inch force main to distributing reservoir. A 200,000 gallon Platt pump held in reserve.

(3) Three drilled wells, one 175 feet deep and two 150 feet deep, on Sassaman Run, 600 feet upstream from Gensel Run intake. Water pumped by electrically operated air lift pump at each well into 4-inch main to distributing reservoir.

DISTRIBUTION

By gravity through 6-inch main; pressures 60 to 110 pounds; about 4 miles distributing mains, 75% 4-inch.

CONSUMPTION

Supply to 2,000 people; 375 taps. Stated consumption 80,000 gallons daily, of which 15,000 gallons is industrial. No means of measurement.

CENTRALIA BOROUGH, ARISTES, BYRNESVILLE & WILBURTON (CONYNGHAM TWP.), COLUMBIA COUNTY

WYOMING VALLEY WATER SUPPLY COMPANY
(Lehigh Valley Coal Company)

	Population 1910 census	Increase since 1900	Estimated 1915
Centralia,	2,429	381	2,600
Aristes,	600	----------	700
Byrnesville,	300	----------	400
Wilburton,	400	----------	500
Total,	3,729	----------	4,200a

LOCATION

Southern Columbia County, at headwaters of Shamokin Creek, on Lehigh Valley R. R., and connected to Shamokin and Ashland by Shamokin & Mount Carmel Traction Co. Topography of section is mountainous, all places except Aristes and Wilburton being in valleys; range of elevations 1,061 to 1,755.

INDUSTRIES.

Mining communities of Lehigh Valley Coal Co.; shirt factory at Centralia.

WATER SUPPLY

Locust Mountain Department of Wyoming Valley Water Supply Co., subsidiary of Lehigh Valley Coal Co. (For complete description of company see Hazleton, this section.) This company has leased the following companies:

Name.	Inc.	Incorporated for
Centralia Water Co.	1904	Centralia Borough
Locust Mountain Water Co.,	1881	Conyngham Township

The territory supplied is in section No. 9, but the principal source of supply is in Section No. 5.

SOURCE AND COLLECTION

(1) South Branch Roaring Creek, by pumping; 33,000,000 gallon reservoir, supply of old Locust Mountain Water Co., at elevation 1,123, 4.5 miles below source; watershed area 3,220 acres; also an intake at elevation 1,110. Two wells 300 feet deep, near reservoir, supply it by air lift in very dry seasons.

Water pumped in two stages through 16-inch force main 3,000 feet south to standpipe on top of Big Mountain, at elevation 1,773, a head of 650 feet, there being one steam and one electric pump at each station. Pumping equipment two 1,800,000 gallon Worthington steam pumps, six 100 hp. Levan return tubular boilers, two 2,376,000 gallon Aldrich electric pumps, one Sullivan air compressor and two Peerless air lifts, total capacity 750,000 gallons daily. Water soft.

(2) Springs on two watersheds in mountains, by gravity; old Centralia Water Co. sources; 500,000 gallon high service reservoir northeast, at elevation 1,622, and 5,400,000 gallon low service reservoir northwest of Centralia at elevation 1,537. No flow in summer. Water soft.

(3) Springs collected in 1,000,000 gallon reservoir, just southeast of Mount Carmel, at elevation 1,252; watershed area 140 acres.

DISTRIBUTION

From (1) by gravity through 18-inch main from standpipe at summit of force main to 2,200,000 gallon distributing reservoir, just north of Aristes, elevation 1,755; 18-inch gravity main reducing to 14-inch, through Aristes and branching into two 10-inch mains, one of which reduces to 8-inch and smaller, to Wilburton and Mt. Carmel, and the other, reducing to 6-inch, keeping north of Centralia to connection with Mt. Carmel Water Co.

(2) By gravity through 4-inch main from low service reservoir to Centralia and 4-inch main from high service reservoir to Centralia. High service main has emergency connection to Roaring Creek supply.

(3) By gravity through 4-inch main to Lehigh Valley Coal Co. line to Sayre Colliery.

Pressures 15 to 200 pounds. Distributing mains as follows:

Size (inches),	18	14	10	8	6	4	3	Total
Length (miles),	1.44	0.34	1.02	2.08	4.56	4.68	1.87	15.99

Fourteen fire hydrants, 2½-inch.

CONSUMPTION

Supply to 4,200 people through 500 taps, 6 domestic and 25 industrial taps being metered. Average daily consumption 635,000 gallons, 13% estimated domestic and 87% metered industrial. Furnishes partial supply to Mt. Carmel Water Co. Supplies following collieries: Centralia, Locust Run, Midvalley No. 1, Midvalley No. 2, Sayre, Sioux and Continental shaft.

Supplies Lehigh Valley R. R. tanks, one at Mt. Carmel, one at Aristes, one east of Centralia; also Northern Central R. R. tank at Mt. Carmel.

CHINCHILLA (SOUTH ABINGTON TWP), LACKAWANNA COUNTY.

PRIVATE SUPPLY OF W. C. HALL
CHINCHILLA WATER COMPANY

Estimated population 1915, 300b

LOCATION

In northeastern Lackawanna County, just north of Scranton, on Griffin Creek and Delaware, Lackawanna & Western R. R. Farming section.

WATER SUPPLY

Part of village supplied from private system owned by W. C. Hall and part by Chinchilla Water Co., incorporated 1913.

PRIVATE SUPPLY OF W. C. HALL

GENERAL DESCRIPTION

Spring on hillside of stated flow of 20,000 gallons daily. Water collected into 1,000 gallon basin and delivered by gravity through 4,600 feet of 4-inch pipe to 25 families. Estimated average daily consumption 6,500 gallons.

CHINCHILLA WATER COMPANY

GENERAL DESCRIPTION

Spring and well on south hillside. Water collected in small reservoir and distributed through 1½-inch pipe to 30 houses. Well water pumped by wind engine. Originally operated as private supply of James Holgate, but purchased by George W. Davis, who secured a charter proposing to use a new drilled well as source of supply, the water to be pumped by gasoline engine pump into new 200,000 gallon reservoir at higher elevation than the present one and with 6-inch and 4-inch supply mains. A 10-inch well 510 feet deep drilled and tested to stated flow of 4,000 gallons per minute without materially lowering water level. Little else done toward construction of proposed works, owing to competition.

CONYNGHAM BOROUGH, LUZERNE COUNTY

CONYNGHAM WATER COMPANY

Population 1910 census, 406. Estimated 1915, 400b

LOCATION

In southern Luzerne County, at base of Buck Mountain, in Nescopeck Valley, about 5 miles northwest of Hazleton.

INDUSTRIES

Farming; residence of coal miners.

WATER SUPPLY

From Conyngham Water Co., incorporated 1880 for Conyngham village and vicinity.

SOURCE AND COLLECTION

Supply from tunnel driven 550 feet into mountain and cement lined; collected in 650,000 gallon reservoir.

DISTRIBUTION

By gravity from reservoir through 3-inch pipe; pressures about 125 pounds.

CONSUMPTION

Practically entire population supplied. Consumption not known; on basis of 30 gallons per capita, would be 12,000 gallons per day.

CRYSTAL RIDGE, HOLLAR'S HILL AND CRANBERRY COLLIERY (HAZLE TWP.), LUZERNE COUNTY

PRIVATE SUPPLY
(A. Pardee & Co.)

Estimated population, 600b

LOCATION

In southern Luzerne County, on Cranberry Creek, tributary of Black Creek, 1.5 miles west of Hazleton; on Lehigh Valley R. R.

INDUSTRIES

Cranberry Colliery of A. Pardee & Co.

WATER SUPPLY

Private system owned by A. Pardee & Co.

SOURCE AND COLLECTION

Grape Run, tributary of Cranberry Creeek, by gravity to 25,000,000 gallon reservoir 1 mile south of colliery; watershed area 251 acres; no flow from stream during dry season. Reservoir also fed by springs in bottom and 3-inch air line from two wells 0.25 mile south of reservoir. Air compressor at colliery.

DISTRIBUTION

By gravity through 2,140 feet of 12-inch main, reducing to 8-inch for 4,092 feet.

CONSUMPTION

Supplies 130 families and mines and breakers. Average daily consumption 350,000 gallons—10,000 gallons domestic and 340,000 gallons industrial.

HISTORICAL

Deep Well Water Co., incorporated July 20, 1911, by the Pardee interests, with the intention to take over this system, but up to date this arrangement has not been put into operation. Application pending for dissolution of company.

DALLAS BOROUGH, LUZERNE COUNTY

DALLAS WATER COMPANY
PRIVATE SYSTEM OF B. W. BRICKEL

Population 1910 census, 576; decrease since 1900, 87. Estimated 1915, 650a

LOCATION

Extreme northeastern Luzerne County, on Toby Creek; on electric railway and branch of Lehigh Valley R. R. from Wilkes-Barre.

INDUSTRIES

Farming and a summer resort.

WATER SUPPLY

From Dallas Water Co., incorporated 1893 for Dallas Borough, and private system of B. W. Brickel.

DALLAS WATER COMPANY SYSTEM

SOURCE AND COLLECTION

Supply from three springs and flowing artesian well at base of hill at headwaters of Toby Creek, about 1.5 miles northwest of borough. Small covered reservoirs built around springs. Storage capacity of three reservoirs, 230,000 gallons. Dry weather yield of well said to be 21,000 gallons per day. Water medium hard.

DISTRIBUTION

By gravity through 4-inch main to distributing system; pressure averages 40 pounds; 1 fire hydrant, 2-inch. Length of mains not given.

CONSUMPTION

About 800 persons supplied; 160 taps, part being outside of borough limits. Consumption not measured; estimated at 15,000 gallons daily.

PRIVATE SYSTEM OF B. W. BRICKEL

SOURCE AND COLLECTION

Supply from 6-inch well about 400 feet from Toby Creek, 180 feet deep, penetrating 74 feet into sandstone. Water pumped by 3 hp. Olds deep well pump into 4,200 gallon concrete reservoir about 100 feet higher than Main St., along which pipe line is laid.

DISTRIBUTION

By gravity from reservoir through 1,500 feet of 2½-inch pipe to about 25 families.

DANVILLE BOROUGH, MONTOUR COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 7,517; decrease since 1900, 525. Estimated 1915, 7,500.

LOCATION

Southeastern Montour County, on North Branch of Susquehanna River, on Philadelphia & Reading and Delaware, Lackawanna & Western railroads. Occupies flat land along river, and northeastern part lies on hillside 150 to 200 feet above river. Danville State Hospital for the Insane is 1.5 miles upstream from Danville; about 400 acres along river and Toby Run. Buildings on eminence 0.25 mile from river.

INDUSTRIES

County seat and largest community in county. Tube, stove, brake beam and iron works, knitting and silk mills, suspender and pants factory, foundry and machine shop.

WATER SUPPLY

From municipal works, first operated in 1873. State Hospital works installed about 1872 and filters added in 1903.

MUNICIPAL WATER WORKS

SOURCE AND COLLECTION

Supply from Susquehanna River, taken through filter cribs just below bridge to South Danville (Riverside P. O.), Northumberland County, to pumping station and filter plant. Raw water pumped to sedimentation basin, thence flows by gravity to three Jewell filters and into 100,000 gallon clear well. Pumping equipment five Worthington pumps, two 3,000,000 gallons capacity each, and one of 1,500,000 gallons.

DISTRIBUTION

By pumping from filters directly into distributing system. Pressures 80 to 100 pounds. Distributing mains as follows:

Size (inches),	12	8	6	4	1½	Total
Length (miles),	0.38	3.11	4.62	4.07	0.13	12.3

One hundred and twenty fire hydrants, 4-inch.

CONSUMPTION

About 7,000 population supplied; 1,830 taps. Average daily consumption 800,000 gallons, 90% domestic and 10% industrial; maximum consumption 1,000,000 gallons.

STATE HOSPITAL SYSTEM

Supply from Susquehanna through filter cribs and 16-inch intake pipe, to pumps, where it is raised to 11,000 gallon wooden sedimentation tank, thence by gravity through unit Jewel filter, combined capacity 1,200,000 gallons per day, to 47,000 gallon filtered water basin, from which it is forced by high service pumps through 8-inch force main to 3,000,000 gallon storage reservoir on hill above hospital building. Pumping equipment 1,000,000 gallon Worthington and 1,000,000 gallon Snow pressure pumps, and 1,250,000 gallon duplex Worthington and 1,250,000 gallon Blake high pressure pumps.

Toby Run can be used as auxiliary supply by wooden flume to pump well.

DISTRIBUTION

By gravity through 6-inch mains.

CONSUMPTION

Supply to about 1,700 people. Stated average daily consumption 500,000 gallons; maximum 800,000 gallons.

DICKSON BOROUGH, LACKAWANNA COUNTY

PRICEBURG WATER COMPANY

LOCATION

Northeastern Lackawanna County, on Lackawanna River, just north of Scranton; on Erie, Delaware & Hudson, and New York, Ontario & Western railroads.

INDUSTRIES

Coal mining.

WATER SUPPLY

Priceburg Water Co., incorporated 1899 for Priceburg, furnishes supply to two collieries of Priceburg Coal Co. Supply supplemented in time of drought by connection with mains of Olyphant Water Co. of the Lackawanna Valley system.

SOURCE AND COLLECTION

Supply from small tributary rising in Bald Mountains and entering Lackawanna River at Priceburg. Storage and distributing reservoir about 1 mile above mouth.

DISTRIBUTION

By gravity from reservoir.

DEEP RUN AND GOWEN (BLACK CREEK TWP.), LUZERNE COUNTY

WYOMING VALLEY WATER SUPPLY COMPANY
(Lehigh Valley Coal Company)

Estimated 1915 population: Deep Run, 160; Gowen, 30.

LOCATION

Southern Luzerne County, Black Creek Township, along Black Creek; on Erie Division of Pennsylvania R. R. and Lehigh Valley R. R.

INDUSTRIES

Mining villages of Lehigh Valley Coal Co.

WATER SUPPLY

Hazleton Department of Wyoming Valley Water Supply Co., subsidiary of Lehigh Valley Coal Co. (Complete description of this company under Hazleton, this section.) Leased Tomhicken Water Co., incorporated 1893 for Black Creek Township.

SOURCE AND COLLECTION

(1) Deep Run, small tributary of Black Creek from north; intake just north of Fern Glen; watershed area 0.46 square miles. Water soft.

(2) Roberts Run, tributary to Black Creek from west; 20,000 gallon intake 1 mile west of Gowen; watershed 3.27 square miles. Water soft.

DISTRIBUTION

(1) By gravity through 3-inch pipe to Gowen No. 4 operations and to Gowen.

(2) By gravity through 3-inch pipe to Gowen, joining 3-inch from No. 1.

Pressure 75 pounds; 0.9 mile distributing pipe, 2-inch to 3-inch.

CONSUMPTION

Supply to 190 people. Stated daily consumption 6,000 gallons, 95% industrial and 5% domestic. No means of measurement.

DERINGER AND FERN GLEN VILLAGES (BLACK CREEK TWP.), LUZERNE COUNTY

WYOMING VALLEY WATER SUPPLY COMPANY
(Lehigh Valley Coal Company)

Estimated 1915 population: Deringer, 250; Fern Glen, 200

LOCATION

Southern Luzerne County, Black Creek Township, in valley of Black Creek; on Erie Division of Pennsylvania R. R. and Lehigh Valley R. R. Elevation of Deringer 1,090 and Fern Glen 1,010.

INDUSTRIES

Mining operation of Coxe Bros. and Co., subsidiary of Lehigh Valley Coal Co

WATER SUPPLY

Hazleton Department of Wyoming Valley Water Supply Co., subsidiary of Lehigh Valley Co. (Complete description of this company under Hazleton, this section.) Leased Tomhicken Water Co., incorporated 1893 for Black Creek Township.

SOURCE AND COLLECTION

(1) Schaars Run, tributary of Black Creek from south; 536,000 gallon reservoir about 2 miles east of Deringer, elevation 1,736: watershed area 1.4 square miles. Water soft.

(2) Drilled well on Mine Run about 0.5 mile north of Deringer.

DISTRIBUTION

From (1) by gravity through 6-inch main with 4-inch connection to 10,000 gallon tank just below on Black Creek, and to 100,000 gallon tank at Deringer.

From (2) by gravity through 4-inch main to colliery for industrial supply, available flow reported 250 gallons per minute.

Pressure 45 to 55 pounds; 3 miles distributing mains; 6 fire hydrants, 2½-inch.

CONSUMPTION

	Population supplied	Taps	Stated daily consumption (domestic)
Deringer,	250	10	4,800 gals.
Fern Glen,	175	5	3,700 gals.
Total,	425	15	8,500 gals.

DRIFTON, (HAZLE AND FOSTER TWPS.), ECKLEY, (FOSTER TWP.), AND BUCK MOUNTAIN, (LAUSANNE TWP.), LUZERNE AND CARBON COUNTIES

WYOMING VALLEY WATER SUPPLY COMPANY
(Lehigh Valley Coal Company)

Estimated 1915 population: Drifton and Woodside Addition, 1,610; Buck Mountain (Carbon County), 117; Eckley, 791; total, 2,518a

LOCATION

Drifton, in southern Luzerne County, just south of Freeland and 5 miles northeast of Hazleton, at headwaters of Black Creek. Eckley, 3 miles east of Drifton, on divide between Delaware and Susquehanna drainage basins. Buck Mountain, 2.5 miles southeast of Eckley, in Carbon County, at headwaters of Hunters Run, tributary of Lehigh River. On Lehigh Valley R. R. and Lehigh traction line.

INDUSTRIES

Mining villages of Lehigh Valley Coal Co.

WATER SUPPLY

Hazleton Department of Wyoming Valley Water Supply Co., subsidiary of Lehigh Valley Coal Co. (Complete description under Hazleton, this section.) Leased, in 1910, the Drifton Water Co., incorporated 1893 for Hazle Township.

SOURCE AND COLLECTION

(1) Sand Spring at Buck Mountain, collected in 40,000 gallon reservoir, elevation 1,269, and pumped by Goyne duplex pump through 4-inch and 6-inch force mains to upper pumping station, at elevation 1,517, where a 12-inch Coxe-Knowles pump forces water through 4-inch and 6-inch force mains to Porter Swamp reservoir at Eckley, feeding a 50,000 gallon tank (lower Buck Mountain), at elevation 1,688. This line has 3-inch branch to 50,000 gallon tank (Upper Buck Mountain), elevation 1,680, at Buck Mountain coal operations. Force mains, 2.35 miles, 4-inch and 6-inch. Reported minimum flow of Sand Spring 173,000 gallons daily; watershed area 1.0 square mile. Water soft.

An emergency intake on tributary of Hunters Run, 1 mile south of Buck Mountain. O'Reilly's Dam impounds 22,000,000 gallons at eleva-

tion 1,241. A pumping station here has 4-inch force main 2,800 feet long connected to Sand Spring mains.

(2) Porter Swamp at Eckley; watershed area 1.55 square miles. Reservoir capacity 1,080,000 gallons, at elevation 1,594, having pumping station with two Worthington duplex pumps, each of 600,000 gallons capacity, which force water through 6-inch and 8-inch main for distribution at Eckley and Drifton. Water soft.

(3) Three drilled wells at Woodside, 8-inch and 10-inch diameter; two 600 feet and one 893 feet deep; pumped by 3-inch air line from compressor at Drifton colliery through 6-inch line to distributing tank at Drifton. Reported minimum flow 120,000 gallons daily. Water soft.

DISTRIBUTION

From (1) by gravity from lower tank through 1-inch line 2,400 feet to Buck Mountain for domestic purposes and by gravity from upper tank to colliery.

(2) About 0.5 mile from pumping station is a 500,000 gallon distributing reservoir, elevation 1,818, fed from force main. A 3-inch main from this distributing reservoir to domestic supply at Eckley and 370,000 gallon colliery reservoir at elevation 1,716. An 8-inch main continues 2.2 miles northwest, where it supplies a 300,000 gallon distributing reservoir, Drifton No. 1, on mountainside east of Drifton, at elevation 1,750, and continues on to Drifton as a 6-inch main 5,290 feet long.

From (3) by 6-inch main to two 100,000 gallon distributing tanks, at elevation 1,821, north of Drifton.

A 25,000 gallon cedar tank at Aripping Slope and a 50,000 gallon cedar tank at Slope No. 11 are used for fire purposes; 19 fire hydrants; 8 miles distributing mains, 1-inch to 6-inch, more than 36% being 4-inch; pressures 50 to 60 pounds at Drifton; 40 to 50 pounds at Eckley.

CONSUMPTION

Place	Population supplied	Taps		Ave. daily consumption	
		Domestic	Industrial	Total	Industrial
Drifton,	1,610	695	5	383,000	326,000
Eckley,	117	71	3	165,000	157,000
Buck Mountain,	791	6	2	1,700	----------
Total,	2,518	772	10	549,700	483,000

Consumption measured by meters placed temporarily. Supplies Drifton No. 2 Colliery, Eckley Colliery and Buck Mountain operations of Lehigh Valley Coal Co.

FREELAND BOROUGH AND SOUTH HERBERTON VILLAGE (FOSTER TWP.), LUZERNE COUNTY

FREELAND WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Freeland,	6,197	943	6,500b
South Herberton,			150b

LOCATION

Southeastern Luzerne County, about 6 miles northeast of Hazleton, on divide between Susquehanna and Lehigh drainage basins; on Lehigh Valley R. R.

INDUSTRIES

Coal mining, silk mill.

WATER SUPPLY

From Freeland Water Co., incorporated 1883 for Freeland Borough.

SOURCE AND COLLECTION

Supply from six drilled wells 500 to 600 feet deep, three each at northern and three at eastern border of borough. Water pumped into receiving basins, thence pumped direct into mains. Four Jeanesville and one Downie deep well pumps, and one air line.

Pumping plants operate about 17 hours daily as follows: Eastern station, 500,000 gallon Jeanesville and 1,000,000 gallon Worthington; Northern station, 500,000 gallon Jeanesville and 400,000 gallon Knowles.

Water medium hard, due to magnesia.

DISTRIBUTION

By pumping directly to distributing system, with connection to 500,000 gallon equalizing reservoir on hill west of center of borough. Pressures 40 to 100 pounds. About 11 miles distributing mains;

about a mile of 8-inch and 10-inch extends from northern pumping station, a short section of 6-inch from eastern station, and 6-inch and 8-inch to south Herberton; 35 fire hydrants, 5-inch.

CONSUMPTION

Entire population supplied through 980 taps, 30 in Foster Township; 80 are metered. Average daily consumption 300,000 gallons; maximum 500,000 gallons, measured by pump displacement.

GIRARD ESTATE, SCHUYLKILL AND COLUMBIA COUNTIES

THE GIRARD WATER COMPANY

Estimated 1915 population, 12,000a

LOCATION

In Butler, West Mahanoy, Mahanoy, Delano, Kline, Union and East Union townships, Shenandoah, Girardville and Gilberton boroughs, Schuylkill County; and Conyngham and Roaring Creek townships, Columbia County. Territory supplied in Section No. 9, but source of supply in Section No. 5.

INDUSTRIES

Mining in Butler, Mahanoy, West Mahanoy and Union townships, and Girardville, Gilberton and Shenandoah boroughs, Schuylkill County; and Conyngham Township, Columbia County. Watersheds of The Girard Water Co. in Conyngham Township, Columbia County, and Union and West Mahanoy townships, Schuylkill County. Watersheds leased to Delano Water Co. in Mahanoy Township, to Mahanoy City Water Co. in Mahanoy Township, to Shenandoah Borough Water Co. in East Union and West Mahanoy townships, and to the Shenandoah Citizens Water and Gas Co. in Union and West Mahanoy townships. Farms in Union and East Union townships. Timber land in

remainder of district. Mines leased to operating companies, as follows:

Colliery	Lessees
Hammond,	Philadelphia & Reading Coal & Iron Co.
Kimberley,	Philadelphia & Reading Coal & Iron Co.
East Bear Ridge,	East Bear Ridge Coal Co.
Packer No. 1-5,	Lehigh Valley Coal Co.
Packer No. 2,	Lehigh Valley Coal Co.
Packer No. 3,	Lehigh Valley Coal Co.
Packer No. 4,	Lehigh Valley Coal Co.
Continental,	Lehigh Valley Coal Co.
William Penn,	Susquehanna Coal Co.
Kehley's Run,	Thomas Colliery Co.
Girard,	W. R. McTurk Coal Co.
West Bear Ridge,	Harleigh-Brookwood Coal Co.
Weston,	Locust Mountain Coal Co.
Oxford Washery,	Oxford Coal Co.

WATER SUPPLY

The Girard Water Co., incorporated in 1883 for West Mahanoy Township, is controlled by Girard Estate through ownership of all the stock. The Directors are all members of Boards of Directors of City Trusts of the City of Philadelphia. The company owns 6662·03 acres of mountain land in Roaring Creek, Conyngham, Butler, Mahanoy, West Mahanoy, Union and East Union townships. Supply is to district of 4 miles between Shenandoah and Girardville, in which are villages of Brownsville, William Penn, Lost Creek, Colorado, Connerton and Rappahannock; aggregate population of district supplied, 12,000. These villages are supplied through pipe lines owned and maintained by Girard Estate, a rental being paid by The Girard Water Co., which owns sources of supply and reservoirs. It supplies also Shenandoah Citizens Water and Gas Co. and Girardville, pipe lines in the latter being owned by borough.

SOURCE AND COLLECTION

(1) Dresher's Run, a tributary of Little Catawissa Creek; reservoir No. 5, capacity 264,000,000 gallons 1.25 miles southwest of Ringtown Borough, in Union Township; watershed area 557 acres. Average flow from June 1, 1913, to May 31, 1914, reported as 1,031,000 gallons daily. Water pumped through 16-inch force main 7,200 feet long southerly to reservoir No. 3, on Lost Creek, a tributary of Shenandoah Creek, in West Mahanoy Township, and 600 feet above pumps. Pumping equipment two 1,330,000 gallon centrifugal pumps driven by direct-connected motors, power being supplied by Schuylkill Gas and Electric Co., with provisions for future installation of two more units of same capacity.

Reservoir No. 3, capacity 73,092,000 gallons, together with reservoir No. 2, capacity 29,957,000 gallons and directly below No. 3, are used

as distributing reservoirs, the natural drainage of watershed of 0.78 square mile being diverted by artificial channel and returned to Lost Creek below reservoir No. 2.

(2) Whiskey Mill Creek, tributary to Little Catawissa Creek, 2 miles west of Dresher's Run; small intake dam short distance above mouth; watershed area 1,274 acres. A 16-inch gravity line leads 13,000 feet to reservoir No. 5.

DISTRIBUTION

By gravity through 12-inch high service main from reservoir No. 3 to Hammond colliery and easterly as an 8-inch to Girardville; through an 8-inch from reservoir No. 3, cross connected to 12-inch, southerly and easterly to Girardville through low service district, with an 8-inch branch westerly to Shenandoah; and through 10-inch main from reservoir No. 3, reducing to 8-inch and 6-inch, southerly to William Penn colliery; pressures from 150 to 270 pounds. Distributing mains as follows:

Size (inches),	12	10	8	6	4	3	2	Total
Length (miles),	2.46	0.35	4.30	2.24	2.48	0.19	0.31	12.33

CONSUMPTION

No water supplied directly to individuals; about 12,000 people in district supplied. Average daily consumption 1,400,000 gallons; 21% domestic; 75% industrial to twelve mining operations, and 4% industrial to Schuylkill Ry., Lehigh Valley R. R. and Philadelphia & Reading Ry.; all measured by meters.

GLEN SUMMIT (FAIRVIEW TWP.), LUZERNE COUNTY

WYOMING VALLEY WATER SUPPLY COMPANY
(Lehigh Valley Coal Company)

Estimated 1915 population, 350 May to October; 25, remainder of year

LOCATION

Eastern central Luzerne County, Fairview Township, near Fountain Lake, at headwaters of Conety's Run, a tributary of Nescopeck Creek; on Central R. R. of New Jersey, and known as Glen Summit Springs, on Lehigh Valley R. R.

WATER SUPPLY

Glen Summit Department of Wyoming Valley Water Supply Co., a subsidiary of Lehigh Valley Coal Co. (Complete description of this company under Hazleton, this section.) Has leased Denison Township Water Co., incorporated 1904 for Denison Township.

SOURCE AND COLLECTION

Spring on west bank of Fountain Lake about 1.25 miles southeast of village. Water flows through 8-inch pipe to 186,000 gallon receiving reservoir at elevation 1,760, or ten feet higher than lake surface, then pumped through 6-inch force main 0.75 mile to a 199,000 gallon distributing reservoir at elevation 1,962, 0.5 mile southeast of village. Pumping equipment a duplex pump, a 75 hp. return tubular boiler and an emergency Knowles pump with small vertical boiler. Reported minimum flow of spring, 111,000 gallons daily; fairly uniform throughout year. Water soft.

DISTRIBUTION

By gravity through 6-inch main; pressures, 15 to 98 pounds; 2.9 miles distributing mains, 70% smaller than 4-inch; no fire hydrants.

CONSUMPTION

Supply to 350 people in summer and 25 in winter; 41 taps. Average daily consumption 37,000 gallons, all domestic; estimated by displacement in distributing reservoir.

HARWOOD (HAZLE TWP.), LUZERNE COUNTY

HAZLE TOWNSHIP WATER COMPANY
(Harwood Electric Company)

Estimated 1915 population, 750b

LOCATION

Southern Luzerne County, near headwaters of Eagle Run, tributary of Cranberry Creek, and 2.5 miles southwest of Hazleton; on branch of Lehigh Valley R. R.

INDUSTRIES

Mining village of Harwood Coal Co.

WATER SUPPLY

Hazle Township Water Co., incorporated 1910 for Hazle Township, owned by Harwood Electric Co.; has 30 year contract with Wyoming Valley Water Supply Co. for supply from Mt. Pleasant reservoirs. Present supply from that company, water from drilled wells of Hazle Township Water Co., pumped to Mt. Pleasant reservoirs in dry seasons.

SOURCE AND COLLECTION

(1) Old supply from drilled wells, and an intake near headwaters of Cross Run, tributary of Catawissa Creek, above Mt. Pleasant reservoirs of Wyoming Valley Water Supply Co. Intake and pumping station just above reservoirs, with 5-inch force main to 716,000 gallon distributing reservoir about 2,000 feet north, at elevation 1,799, and near distributing reservoir of Wyoming Valley Water Supply Co. Also 4-inch line short distance north to another pumping station, which pumps from wells. This station, at elevation 1,696, has 8-inch force main to distributing reservoir. Wells as follows:

Number	Elevation (feet)	Depth (feet)	Pipes
1,	1709	257	8-inch line to pumps
2,	1713	277	8-inch line to No. 1
3,	1708	263	5-inch line to No. 1
4,	1722	428	8-inch line to pumps
5,	1700	452	4-inch line to 8-inch from No. 1
6,	1716	432	4-inch line to No. 4
7,	1709	465	8-inch line to 8-inch from No. 4
8,	1714	325	4-inch line to 8-inch from No. 1
9,	1711	397	4-inch line to 8-inch from No. 1

(2) Supply from distributing reservoir of Wyoming Valley Water Supply Co., at elevation 1,812, through 8-inch main connecting to 8-inch and 5-inch supply mains from reservoir of Hazle Township Water Co. Also the supply main to Hazleton from same reservoir is connected to 5-inch force main from intake pumping station.

DISTRIBUTION

By gravity through 5-inch and 8-inch mains from distributing reservoir to power plant of Harwood Electric Co., about 0.5 mile north. This company has a cooling pond at elevation 1,741, fed by well No. 11, 482 feet deep, at elevation 1,767 water; raised by air lift and delivered through 500 feet of 8-inch pipe. From power plant 5-inch

line continues to breaker of Harwood Coal Co. nearby and thence a 3-inch main north and east about 0.5 mile to Harwood village. Pressure about 26 pounds.

CONSUMPTION

Supply to 750 people, through eight taps and eight street hydrants, and to Harwood Coal Co. and Harwood Electric Co. Stated average daily consumption 28,000 gallons, 20,000 gallons domestic and 8,000 gallons industrial, included in consumption of Wyoming Valley Water Supply Co., for Hazleton.

HAZLETON, WEST HAZLETON BOROUGH, CRANBERRY AND JEANESVILLE, (HAZLE TWP.), LUZERNE COUNTY; YORKTOWN, (BANKS TWP.), CARBON COUNTY

WYOMING VALLEY WATER SUPPLY COMPANY
(Lehigh Valley Coal Company)

DIAMOND WATER COMPANY OF HAZLETON

	Population 1910 census	Increase since 1900	Estimated 1915
Hazleton City,	25,452	11,222	28,000 (U. S. Census)
West Hazleton,	4,715	2,199	5,300 a
Jeanesville,			800 a
Yorktown,			300 a
Total,			34,400 a

LOCATION

Hazleton in southern Luzerne County, on divide between North Branch of Susquehanna River and Lehigh River drainage basins; Jeanesville in Hazle Township, Luzerne County, and Yorktown in Banks Township, Carbon County, about 2 miles south of Hazleton. On Lehigh Valley R. R., Pennsylvania R. R., Lehigh Traction line and Wilkes-Barre and Hazleton Ry. Range of elevation in Hazleton 1,750 to 1,580, Jeanesville 1,710 to 1,670, Yorktown, 1,745 to 1,725.

INDUSTRIES

Center of Hazleton coal mining district; brush factory, coffin works, two silk factories, three knitting mills, two shirt factories, and Jeanesville iron and pump works.

WATER SUPPLY

Hazleton Department of Wyoming Valley Water Supply Co., subsidiary of Lehigh Valley Coal Co., in 1910 leased Hazleton Water Co., incorporated 1895 for city of Hazleton.

The Wyoming Valley Water Supply Co., incorporated 1900 for Luzerne County, has leased all water companies furnishing a supply to operations of Lehigh Valley Coal Co. or its subsidiaries. There are 11 separate systems under the management of five departments, each system being described under its proper section, as follows:

No.	Place	Section No.	Department
1.	Hazleton City, etc.,	2 & 5	Hazleton
2.	Deep Run and Gowen villages,	5	Hazleton
3.	Deringer & Fern Glen villages,	5	Hazleton
4.	Drifton, Eckley & Buck Mountain villages,	5	Hazleton
5.	Oneida village,	5	Hazleton
6.	Stockton village,	2	Hazleton
7.	Tomhicken village,	5	Hazleton
8.	Centralia borough (etc.),	5	Locust Mountain
9.	Glen Summit village,	5	Glen Summit
10.	Blackwood village,	12	Blackwood
11.	Delano village (etc.),	9	Delano

Part of supply to Hazleton and vicinity comes from Lehigh River tributaries, Section No. 2, but description is under Section No. 5.

Diamond Water Co., incorporated 1887 for Diamond addition to Hazleton and vicinity, which includes West Hazleton.

WYOMING VALLEY WATER SUPPLY COMPANY

SOURCE AND COLLECTION

(1) Catawissa Creek, by pumping. Two Mt. Pleasant storage reservoirs on headwaters, upper 26,540,000 gallons capacity at elevation 1,681, lower 44,165,000 gallons at elevation 1,665, about 3.5 miles southwest of city. Watershed area 0.67 square miles.

Water from these reservoirs pumped through 8-inch and 10-inch force mains, each 3,500 feet long, to 1,500,000 gallons distributing reservoir, at elevation 1,813, on mountain about 0.5 mile above reservoirs. Use of nine drilled wells near pumping station necessary in dry seasons. Pumping equipment one electrically driven 1,000,000 gallon triplex pump and one 2,000,000 gallon steam pump for emergencies. Water soft.

(2) Boyds Run, a tributary of Black Creek, by gravity. Oneida reservoir, 1 mile south of city, capacity 4,600,000 gallons; has not been used since 1911.

(3) Quakake Creek and its tributary, Beisel Run, Lehigh River drainage; forming main supply to city; 21,500,000 gallon reservoir on Quakake Creek at Hudsondale, 7 miles southeast of city, at elevation 1,108; watershed area 16 square miles. A 30-inch pipe 650 feet to pumping station.

A 3,500,000 gallon reservoir on Beisel Run, about 0.5 mile east of other reservoir at elevation 1,126; watershed area 4.3 square miles. A 14-inch pipe 2,300 feet long to pumping station. Water pumped through 12-inch and 16-inch mains, each 28,700 feet long, to Roan distributing reservoir, 1.5 miles southeast of city and 230 feet above, at elevation 1,831. Can pump direct to city through the 12-inch line if necessary. Pumping equipment consists of two 1,625,000 gallon Knowles pumps, working against a head of over 725 feet in a distance of 9 miles, and two sets of Babcock & Wilcox boilers, capacity 500 hp.

(4) Dreck Creek, tributary of Hazle Creek, which is a tributary of Black Creek in Lehigh drainage. A 192,000,000 gallon reservoir at elevation 1,610, and a 45,000,000 gallon reservoir just below at elevation 1,584, about 2.5 miles east of Hazleton; watershed area 2.46 square miles. These reservoirs were completed in 1914, to replace a small reservoir and pumping plant with 6-inch line to Beaver Meadow colliery. An 8-inch gravity line from lower reservoir to Lehigh Valley R. R. tank at Ashmore. A pumping station at lower reservoir will raise water to Roan distributing reservoir.

DISTRIBUTION

From (1) by gravity through 8-inch main from Mt. Pleasant distributing reservoir.

From (2) by gravity through 6-inch main from Oneida reservoir.

From (3) by gravity through 12-inch main from Roan distributing reservoir to city.

Distributing mains as follows:

Size (inches),	16	12	10	8	6	5	4	3 & smaller	Total
Length (miles),	1.97	2.08	1.04	4.72	13.09	0.10	1.80	8.44	33.24
Per cent.,	5.9	6.3	3.1	14.2	39.4	0.3	5.4	25.4	100

Pressures 36 to 110 pounds; 56 fire hydrants, 87% 6-inch and 13% 8-inch.

CONSUMPTION

Supply to 16,000 people; 2,700 domestic and 50 industrial taps. Population supplied includes 800 in Jeanesville, 250 in Beaver Meadow and 300 in Yorktown; 56 taps are metered, showing daily

domestic consumption of 25,000 gallons; industrial, 918,000 gallons. Average daily consumption 3,500,000 gallons, 70% domestic and 30% industrial; measured by pump displacement. Of total pumpage 85% from Hudsondale and 15% from Mt. Pleasant.

DIAMOND WATER COMPANY OF HAZLETON

SOURCE AND COLLECTION

(1) Eight drilled wells at Harleigh in valley of Black Creek, 1 mile north of Hazleton. Only five wells, 314 to 800 feet deep, are being used. Water raised to 3,394,560 gallon and 19,000,000 gallon reservoirs, thence pumped to a 612,000 gallon distributing reservoir on hill in northern part of city, 275 feet above pumping station. Pumping equipment 1,000,000 gallon Jeanesville pump electrically operated and 1,000,000 gallon Snyder-Hughes steam pump held as reserve.

(2) Wolffs Run, tributary of Stony Creek; a 144,000,000 gallon storage reservoir west of Humbolt village and 4 miles west of Hazleton.

DISTRIBUTION

From (1) by gravity through 8-inch main.

From (2) by gravity through 16-inch main 4 miles to West Hazleton, where water is pumped into mains by a 1,500,000 gallon Jeanesville centrifugal pump electrically operated; pressures 10 to 86 pounds. Distributing mains as follows:

Size (inches),	16	12	8	6	5	4	3	Total
Length (miles),	0.3	1.2	1.1	1.7	0.6	12.7	0.3	17.9
Per cent.,	2	7	6	9	3	71	2	100

Seventy-six fire hydrants, 6-inch.

CONSUMPTION

Supply to 20,000 people, 13,700 in Hazleton, 5,300 in West Hazleton and about 1,000 outside of West Hazleton in Cranberry Village; 2,500 taps. Stated average daily consumption 1,000,000 gallons, 95% domestic and 5% industrial; measured by meters on both supplies.

JAMISON CITY (SUGARLOAF TWP. AND DAVIDSON TWP.), COLUMBIA AND SULLIVAN COUNTIES

PRIVATE SUPPLY
(Elk Tanning Company)

Estimated 1915 population, 600b

LOCATION

Extreme northern Columbia County, Sugarloaf Township; and southeastern Sullivan County, Davidson Township, on Fishing Creek; on Bloomsburg & Sullivan R. R.

INDUSTRIES

Columbia tannery of Elk Tanning Co.

WATER SUPPLY

(1) Blackberry Run, tributary of Fishing Creek; intake just north of village, with 2-inch gravity main for industrial supply, and domestic supply in Sullivan County.

(2) An 8-inch drilled well 160 feet deep for industrial supply.

(3) Springs on hillside, with 2-inch pipe lines for domestic supply in Columbia County.

(4) Fire protection furnished by 6-inch and 8-inch suctions from mill dam to fire pumps.

CONSUMPTION

Supply to about 200 people. Average daily consumption 300,000 gallons, almost entirely industrial. No means of measurement.

JESSUP (WINTON BORO.), LACKAWANNA COUNTY

MOOSIC MOUNTAIN WATER COMPANY

LOCATION

Central Lackawanna County, in Winton Borough, near junction of Grassy Island Creek with Lackawanna River, about 6 miles above Scranton; on Delaware, Lackawanna & Western R. R.

WATER SUPPLY

Moosic Mountain Water Co., incorporated 1892 for village of Jessup.

SOURCE AND COLLECTION

Sterry Creek, tributary of Grassy Island Creek; 5,340,000 gallon reservoir near headwaters 1.5 miles southeast of Jessup.

DISTRIBUTION

By gravity to village and Jessup Coal Co.

CONSUMPTION

Supply to 250 people. Stated average daily consumption 160,000 gallons, all but 5,000 gallons industrial. Auxiliary supply in dry seasons from Olyphant Water Co.

KULPMONT (MT. CARMEL TWP.), NORTHUMBERLAND COUNTY

KULPMONT WATER COMPANY

Estimated 1915 population, 3,000a

LOCATION

Southeastern Northumberland County, Mt. Carmel Township, 4 miles east of Shamokin; on Shamokin & Mt. Carmel Traction line.

INDUSTRIES

Residential community in western anthracite district.

WATER SUPPLY

Kulpmont Water Co., incorporated 1910 for town of Kulpmont from private system of M. H. Kulp, installed in 1906.

SOURCE AND COLLECTION

Purchase water from Bear Gap Water Co., described under Mt. Carmel Township. An 8-inch main 1,000 feet long taps 10-inch line of that company north of village.

DISTRIBUTION

By gravity through 2.9 miles of 4-inch distributing mains; 28 fire hydrants, 4-inch.

CONSUMPTION

Supply to 3,000 people; 546 taps. Average daily consumption 42,-300 gallons, all domestic; measured by meter on supply main.

LANSDOWN PARK, LACKAWANNA COUNTY

LANSDOWN PARK WATER COMPANY

LOCATION

Northeastern part of Lackawanna County, in South Abington Township, just outside of Clarks Summit, north of Scranton.

INDUSTRIES

New suburban residential district, under development.

WATER SUPPLY

From Lansdown Park Water Co., incorporated 1913 for Lansdown Park.

SOURCE AND COLLECTION

From 8-inch artesian well 614 feet deep, water pumped by 16-foot wind engine power to 25,000 gallon concrete reservoir near well. Flow about 60,000 gallons per day without materially lowering water level.

DISTRIBUTION

By gravity from reservoir through 1,400 feet of 6-inch main; distributing mains 1,400 feet of 4-inch and 600 feet of 3-inch; no hydrants at present.

CONSUMPTION

At time of compilation of these data, only 15 persons supplied, as this is a new development.

LAUREL RUN BOROUGH, LUZERNE COUNTY

(Small supplies outside of Spring Brook Water Supply Company's system (q. v.))

(1) Summer cottages on Wilkes-Barre Mountain; Laurel Run Water Co., incorporated 1884 for Laurel Run. Supply intake on headwaters of Laurel Run, in Wyoming Mountain. Water delivered to masonry reservoir on Wilkes-Barre Mountain, thence distributed to a few summer cottages. Water rights controlled by the Spring Brook Water Supply Co. with which arrangements were made for taking supply.

(2) Mountain Park of Central R. R. of New Jersey, on Wilkes-Barre Mountain. Supply for park used by excursion parties from intake on Gin Creek through 3-inch pipe line.

(3) Lehigh Valley Railroad Tank; small intake on Deep Hollow Run used for a tank supply to the railroad at Deep Hollow Station.

McADOO BOROUGH AND NEIGHBORING VILLAGES, SCHUYLKILL COUNTY, AND BANKS TOWNSHIP, CARBON COUNTY

HONEYBROOK WATER COMPANY
(Lehigh and Wilkes-Barre Coal Company)

	Population 1910 census	Increase since 1900	Estimated 1915
McAdoo,	3,389	267	3,300
Honeybrook, Kline township,			1,000
Tresckow, Kline township,			1,000
Banks township, Carbon county,			
Audenried, Carbon county,			1,000

LOCATION

Borough and adjoining villages in northern Schuylkill and western Carbon counties, at headwaters of Catawissa Creek.

INDUSTRIES

Anthracite mining.

WATER SUPPLY

From Honey Brook Water Co., incorporated 1891 for Audenried; owned by Lehigh and Wilkes-Barre Coal Co.

SOURCE AND COLLECTION

From two tributaries of Catawissa Creek, in Honey Brook, on which are storage reservoirs connected by 10-inch pipe. Combined drainage area 0.83 square miles. Water medium hard.

DISTRIBUTION

Water pumped from reservoir into distributing mains; pressures from 50 to 100 pounds. Distributing mains as follows:

Size (inches),	8	6	5	4	3	2.5	2	1.5	Total
Length (miles),	0.47	0.70	0.61	3.10	3.05	0.37	2.15	0.42	10.87

Twenty-eight fire hydrants, 5-inch and 4-inch.

CONSUMPTION

Entire population supplied; 880 taps. Average daily consumption 1,250,000 gallons, 65% domestic and 35% industrial; maximum consumption 1,500,000 gallons.

MARION HEIGHTS BOROUGH, (P. O. KEISER), NORTHUMBERLAND COUNTY

MARION HEIGHTS WATER COMPANY

Population 1910 census, 1,362. Estimated 1915 population, 1,600a

LOCATION

Southeastern Northumberland County, 3.5 miles east of Shamokin, near headwaters of Quaker Run, a tributary of Shamokin Creek; on Shamokin & Mt. Carmel Traction line.

INDUSTRIES

Colliery of Greenough Red Ash Coal Co.

WATER SUPPLY

Marion Heights Water Co., incorporated 1907 for Marion Heights Borough from private system installed in 1898.

SOURCE AND COLLECTION

Purchase water from Bear Gap Water Co., described under Mt. Carmel Township. A 6-inch main 2,750 feet long taps 10-inch main of that company west of borough.

DISTRIBUTION

By gravity, with connection to 40,000 gallon reservoir in borough; 1.5 miles distributing mains, 1-inch to 4-inch, 84% 2-inch.

CONSUMPTION

Supply to 1,600 people; 175 taps, of which 21 are yard hydrants. Average daily consumption 31,000 gallons, all domestic; measured by meter on supply main.

MAHANOY CITY, SCHUYLKILL COUNTY

MAHANOY CITY WATER COMPANY

Population 1910 census 15,936; increase since 1900, 2,432. Estimated 1915, 17,200a

LOCATION

In northern Schuylkill County, near headwaters of Mahanoy Creek; on Lehigh Valley and Philadelphia & Reading railroads.

INDUSTRIES

Principal industry anthracite mining; iron works, shirt factories and brewery.

WATER SUPPLY

From Mahanoy Water Co., incorporated by special act in 1866 for Mahanoy City, and amended in 1898 to cover Mahanoy, Delano and East Union townships.

SOURCE AND COLLECTION

Supply from two general sources: (1) Messers and Negro Hollow runs, tributaries of Catawissa Creek, at point about 6 miles northeast of borough; (2) Cole and Pole runs, tributaries of north branch of Mahanoy Creek, about 1 mile north of borough. Both sources supplemented by wells.

(1) Messers and Negro Hollow runs in Lower North Branch Sub-basin, across divide from Mahanoy City. Two storage reservoirs, one 90,000,000 gallons, on Messers Run, and the other 25,000,000 gallons, known as Blue Head reservoir, just below junction of Negro Hollow Run.

Upper reservoir enlarged in 1912, and again in 1914, to give 44,000,000 gallons additional capacity; watershed area of two reservoirs 5 square miles. Water pumped from Blue Head reservoir through 14-inch main over the divide, at height 827 feet, into reservoir No. 1 on Coal Run (source No. 2). An 8-inch artesian well 600 feet deep near station, from which water is forced by air lift into Blue Head reservoir. Pumping equipment 3,000,000 gallon Snow cross-compound condensing pump; Worthington 1,750,000 gallon pump for emergency. Pressure at pumps 365 pounds.

(2) Coal Run and Pole Run: About 2 miles north of borough are three storage reservoirs, combined capacity 41,000,000 gallons, on the former stream, and one of 39,000,000 gallons on the latter. Combined drainage area about 1 square mile. Supply from Coal Run augmented by air lift from drilled wells ranging from 450 to 750 feet in depth. Pumping station near reservoir No. 1 contains Ingersoll-Rand compressor. South of these reservoirs is 1,000,000 gallon distributing reservoir. Water soft.

DISTRIBUTION

By gravity from distributing reservoir to distributing system through three mains 12-inch, 10-inch and 6-inch; pressures 60 to 80 pounds. Distributing mains as follows:

Size (inches),	14	12	10	8	6	Total
Length (miles),	0.3	1.5	2.7	1.0	3.2	8.7
Per cent.,	4.1	17.2	30.9	11.5	36.3	100

Seventy-nine fire hydrants, principally 4-inch; a few 6-inch.

CONSUMPTION

About 19,000 population in borough and in Mahanoy Twp. supplied; 2,900 taps. Average daily consumption 2,000,000 gallons, by meter measurement, about 20% industrial, mostly by three collieries, viz: North Mahanoy colliery, 125,000 gallons; Mahanoy City colliery, 130,000; and Tunnel Ridge colliery, 150,000 gallons daily, for 250 days per year. Maximum daily consumption 2,500,000 gallons.

During summer, company also furnishes approximately 200,000 gallons daily to Wyoming Valley Water Supply Co. (Lehigh Valley R. R.), Delano Department, through a main connecting its reservoir at Park Place with supply main from Messers Run.

MILLVILLE BOROUGH, COLUMBIA COUNTY

MILLVILLE WATER COMPANY

Population 1910 census 611; increase since 1900, 18. Estimated 1915, 620b

LOCATION

In northeastern Columbia County, on Little Fishing Creek; on Susquehanna, Bloomsburg & Berwick R. R.

INDUSTRIES

Farming community; worsted mills, creamery, tannery, wagon factory and flour mill.

WATER SUPPLY

Since 1903, by Millville Water Co., incorporated 1898 for Millville borough.

SOURCE AND COLLECTION

Supply from two dug wells, 12 and 13 feet diameter and 11 and 10 feet deep, near creek in western end of borough. A 144,000 gallon gasoline engine-driven pump delivers water to 150,000 gallon reservoir on hill in eastern part of borough. Flow falls off greatly in summer and is supplemented by pumping from creek. Water slightly hard.

DISTRIBUTION

By gravity from distributing reservoir; pressures from 30 to 90 pounds; distributing mains 1.3 miles 4-inch, 1 mile 6-inch and remainder 8-inch; 2 fire hydrants, 5-inch.

CONSUMPTION

About 400 persons supplied; 90 taps. Average daily consumption, measured by pump displacement, 25,000 gallons, all domestic.

MT. CARMEL TOWNSHIP, NORTHUMBERLAND COUNTY

BEAR GAP WATER COMPANY

LOCATION

Southwest corner of Northumberland County, on Shamokin Creek; on Shamokin Division of Philadelphia & Reading Ry., Shamokin Division of Pennsylvania R. R. and Shamokin and Mt. Carmel traction line.

INDUSTRIES

Coal mining.

WATER SUPPLY

Bear Gap Co., incorporated 1889 for Mt. Carmel Township. Same officers operate Roaring Creek Water Co., supplying Shamokin Borough; territory supplied is in Section No. 9, but the source is in Section No. 5.

SOURCE AND COLLECTION

South Branch of Roaring Creek, by pumping; intake below that of The Roaring Creek Water Co., where creek flows northward through gap in Little Mountain about 4 miles northeast of Shamokin; watershed area 14.3 square miles, 3.7 being below other intake. Water pumped from 3,000,000 gallon impounding reservoir by two 1,400,000 gallon Worthington pumps and one 2,250,000 gallon Wetherill pump to 1,250,000 gallon distributing reservoir on top of Big Mountain, 1 mile southeast of pumping plant. Pumps have 18-inch suctions and 10-inch and 16-inch force mains under head of 753 feet, from elevation 840 to 1,593.

DISTRIBUTION

By gravity through 10-inch and 12-inch mains southeasterly, through Mt. Carmel Township, with branches to collieries and to Marion Heights, Kulpmont and Mt. Carmel Boroughs; 4-inch private line from Locust Summit to Potts Colliery in Locustdale, Schuylkill County. Pressures 10 to 250 pounds. Distributing mains as follows:

Size (inches),	16	12	10	8	6	4	Total
Length (miles),	0.89	2.33	4.19	0.97	3.98	3.86	16.22
Per cent.,	5.5	14.4	25.8	6.0	24.5	23.8	100

CONSUMPTION

Supply is industrial to collieries except that to Marion Heights Water Co., Kulpmont Water Co., and partial supply to Mt. Carmel Water Co.; average daily consumption measured by meters, as follows: Marion Heights Water Co., 28,300 gallons; Kulpmont Water Co., 37,500 gallons; Mt. Carmel Water Co., 57,100 gallons; collieries, 1,360,900 gallons. Total, 1,483,800 gallons.

Supplies the following collieries and railroad, some of which have private pipe lines:

Name	Owner	Private pipe line (feet)
Alaska,	P. & R. Coal & Iron Co.,	
Reliance,	P. & R. Coal & Iron Co.,	
Locust Gap and Spring,	P. & R. Coal & Iron Co.,	2,000
Potts (partial supply),	P. & R. Coal & Iron Co.,	17,000
Pennsylvania,	Susquehanna Coal Co.,	
Richards,	Susquehanna Coal Co.,	
Scott,	Susquehanna Coal Co.,	2,200
Hickory Ridge,	Susquehanna Coal Co.,	
Hickory Swamp,	Susquehanna Coal Co.,	6,000
Colbert,	Shipman Coal Co.,	
Natalie,	Colonial Collieries Co.,	7,000

Supply to Locust Summit water tank, Philadelphia & Reading Ry. Co.

MOOSIC BOROUGH, LACKAWANNA COUNTY

SPRING BROOK WATER SUPPLY CO.
ROCKY GLEN WATER COMPANY

LOCATION

In northeastern part of Lackawanna County, on Lackawanna River just south of Scranton; on Erie R. R. and Lackawanna & Wyoming Valley electric road between Wilkes-Barre and Scranton.

INDUSTRIES

Coal mining.

WATER SUPPLY

From Spring Brook Water Supply Co.'s system. (See Wilkes-Barre.) The Rocky Glen Water Co., incorporated by Arthur Frothingham and others in 1901 for Moosic Borough, constructed dam and 100,000,000 gallon reservoir in 1903 and 1904, but never developed any public supply system. An amusement park was built around this reservoir, and the latter has been used for boating, skating, etc. Small quantity of water pumped to restaurant and other points in the park.

In 1912 the company's rights and plant were sold at sheriff's sale to Edwin S. Williams.

MOSCOW BOROUGH, LACKAWANNA COUNTY

MOSCOW WATER COMPANY

Population 1910 census, 650. Estimated 1915, 1,200a

LOCATION

Northeastern Lackawanna County, at headwaters of Roaring Brook, along Delaware, Lackawanna & Western R. R.

INDUSTRIES

Farming and a silk mill.

WATER SUPPLY

From Moscow Water Co., incorporated 1888 for Madison and Covington townships.

SOURCE AND COLLECTION

From LaTouche Creek, a small tributary of Roaring Brook, and from springs. Water soft. A 1,225,000 gallon reservoir about 1.5 miles south of village; watershed area about 4.5 miles.

DISTRIBUTION

By gravity from reservoir through 10-inch, reducing to 8-inch, main; pressures 30 to 90 pounds. Distributing mains about 2 miles, including 0.5 mile of 8-inch and 0.75 mile of 4-inch; 3 fire hydrants, 2½-inch.

CONSUMPTION

About 630 persons supplied; 126 taps; no meters. Consumption not known; assuming 30 gallons per capita, would be about 20,000 gallons per day.

NORTHUMBERLAND BOROUGH, NORTHUMBERLAND COUNTY

NORTHUMBERLAND WATER COMPANY
PAINT TOWNSHIP WATER COMPANY

Population 1910 census, 3,517; increase since 1900, 769. Estimated 1915, 3,900b

LOCATION

In western Northumberland County, at junction of North and West Branches of Susquehanna River; on Pennsylvania R. R. and Delaware, Lackawanna & Western R. R.

INDUSTRIES

Railroad community; nail works, iron forge, silk mill, hat factory, electric light and power sub-station.

WATER SUPPLY

Since 1894 by Northumberland Water Co., incorporated 1892 for Northumberland Borough; also controls Paint Township Water Co., incorporated 1903 for Paint Township, which supplies the suburbs of Northumberland.

SOURCE AND COLLECTION

(1) From Johnson's Run, 3.5 miles northeast of borough two wells 600 and 645 feet deep and two springs nearby. A 6,000,000 gallon reservoir catches flow from springs and wells, the latter being pumped by air lift. (2) From mine spring rising in abandoned mine tunnel 2.5 miles east of reservoir. Water delivered through 10-inch pipe to intake well from which 6-inch main leads to connect with 10-inch from reservoir. Some supply from small stream just below this intake well, delivered into 6-inch main from mine by means of hydraulic ram. (3) Another small tributary of Johnson's Run, entering about 1 mile below reservoir, utilized during dry season by pumping into 10-inch main from reservoir; supplemented by artesian wells. Pumping equipment consists of a 640,000 gallon Worthington pump, a smaller Worthington and a Gardner.

DISTRIBUTION

Through 10-inch pipe line from reservoir by combined gravity and pumping.

CONSUMPTION

Most of population supplied; 775 taps.

INDUSTRIAL SUPPLIES

The Northern Central, and Delaware, Lackawanna & Western railroads purchase water from borough, except in the dry season, when they pump from river.

SUBURBS OF NORTHUMBERLAND

The territory supplied in Paint Township includes Kapps Heights and Priestly Terrace. A 10-inch and two 6-inch mains extend to Kapps Heights, giving domestic service and fire protection to 14 families. At Priestly Heights only two families are supplied. Water supplied from mains of Northumberland Water Co.

NUREMBURG (NORTH UNION TWP.), LUZERNE AND SCHUYLKILL COUNTIES

PRIVATE SUPPLY OF T. A. BREISCH

Population 1915, 750a

LOCATION

In northern Schuylkill County, extending into Luzerne County.

INDUSTRIES

Farming; residence of miners from Gowen, across the ridge of Buck Mountain.

WATER SUPPLY

From private system of Theodore A. Breisch. Supply taken from drilled well 96 feet deep, from which 15,000 gallon pump delivers water into 1,500 gallon basin, whence it flows by gravity to supply about 100 population. Water medium hard. Estimated daily consumption about 1,500 gallons, all domestic.

ONEIDA (EAST UNION TWP.), SCHUYLKILL COUNTY

WYOMING VALLEY WATER SUPPLY COMPANY
(Lehigh Valley Coal Company)

Estimated 1915 population, 1,000a

LOCATION

Northern Schuylkill County, East Union Township, on Mud Run, a tributary of Big Tomhicken Creek; on Lehigh Valley R. R.

INDUSTRIES

Mining village of Coxe Bros. & Co., a subsidiary of Lehigh Valley Coal Co.

WATER SUPPLY

Hazleton Department of Wyoming Valley Water Supply Co., subsidiary of Lehigh Valley Coal Co. (Complete description of this company under Hazleton, this section.) Leased the Oneida Water Co., incorporated by Lehigh Valley Coal Co. in 1893 for East Union Township.

SOURCE AND COLLECTION

(1) Small tributary of Mud Run; reservoir 1 mile west of village at Slopes No. 3 and No. 5.

(2) Drilled wells, as follows:

Location	Reported minimum flow (gals. daily)	Pipe connection
(a) One, northeast of slope No. 3,	50,000	4-inch pipe to tank.
(b) One, just south of village,,	45,000	Feeds small reservoir
(c) One well and springs south of village,	75,000	Feeds small reservoir
(d) One northwest of slope No. 4,	35,000	
Total,	205,000	

Water collected from (b) and (c) into 20,000 gallon reservoir, at elevation 1,620, north of Slope No. 2 and south of village and pumped to a 35.000 gallon distributing tank at elevation 1,770 near breaker east of village. There are two pumps single piston type. Method of collecting from (a) and (d) not stated. Water soft.

(3) Springs near Slope No. 4, about 3,000 feet southeast of village, collected in 8,000 gallon reservoir. A 3-inch main leads 1,000 feet to a 450,000 gallon reservoir at elevation 1,685, where a Cameron pump lifts water through 4-inch force main 1,530 feet long to breaker distributing tank. Water soft.

DISTRIBUTION

By gravity from (1) and from distributing tank near breaker; pressures 22 to 35 pounds; 3.4 miles distributing mains, 2-inch to 4-inch; 11 fire hydrants, 2½-inch.

CONSUMPTION

Supply to 1,000 people; 35 taps. Average daily consumption 200,000 gallons, 10% domestic and 90% industrial; measured by meters placed temporarily.

RINGTOWN BOROUGH, SCHUYLKILL COUNTY

RINGTOWN SPRING WATER SUPPLY COMPANY

Population 1910 census, 723.

LOCATION AND INDUSTRIES

In northern Schuylkill County, on Dark Run, a tributary of Catawissa Creek; on Philadelphia & Reading R. R. A few small manufacturing plants.

WATER SUPPLY

From Ringtown Spring Water Supply Co., incorporated 1910. Supply from drilled wells in northwest corner of borough. Water forced by gas engine driven pump into two reservoirs on hill nearby, combined capacity of 100,000 gallons, from which it flows by gravity through 8-inch pipe with 4-inch and smaller laterals, supplying about 18 families. Pressure about 76 pounds. Consumption not measured; probably not over 2,000 gallons per day.

ROCK GLEN VILLAGE, LUZERNE COUNTY

PRIVATE SUPPLY

Estimated population, 300

LOCATION

Southern Luzerne County, on Black Creek, and on Pennsylvania R. R.

INDUSTRIES

Mining village.

WATER SUPPLY

Private supply. Formerly owned by Tomhicken Water Co., now part of Wyoming Valley Water Supply Co.

SOURCE AND COLLECTION

Falls Run, a tributary of Black Creek from west at village. Watershed area above intake 2.44 square miles.

CONSUMPTION

Domestic supply at village.

SCRANTON, CARBONDALE, ELEVEN BOROUGHS AND SEVERAL VILLAGES NORTH TO FOREST CITY, SUSQUEHANNA AND LACKAWANNA COUNTIES

SCRANTON GAS AND WATER COMPANY

Aggregate population 1910 census, 220,000; increase since 1900. 55,000; estimated 1915, 248,000.

(For details of places and populations see subsequent table)

LOCATION

Territory covered lies in Lackawanna Valley, which is northerly continuation of Wyoming Valley, and stretches northeasterly and southwesteriy along Lackawanna River diagonally across Lacka-

wanna County from Scranton, the county seat, into Susquehanna County at Forest City. District traversed by lines of the Erie, Delaware & Hudson; Delaware, Lackawanna & Western, and New York, Ontario & Western railroads, and by the surburban lines of the Scranton Electric Rys. and has connections with the Lehigh Valley and Central R. R. of New Jersey in the district directly to the south.

INDUSTRIES

Coal mining, principal and fostering industry; silk, lace, woolen and cotton mills, underwear factories, car shops, foundries and breweries.

WATER SUPPLY

System under financial control and management of Scranton Gas and Water Co., secured by stock ownership or lease of 23 other companies within district. Company incorporated by special act of 1854 to supply water in Providence Township, Luzerne County (now Scranton City, Lackawanna County), and in 1900 was given additional privileges. Other companies have practically only nominal existence, except as may be necessary to conform to certain legal requirements. Some of them formerly constructed and operated independent works, which form parts of present system. Others never built works or operated.

The following table gives the names of the companies and indicates the manner of their control. The system is operated in three main divisions, under nominal management of The Consolidated Water Supply Co., the Olyphant Water Co. and The Scranton Gas and Water Co., which in turn are sub-divided, as will appear in subsequent tables.

Name of company	Incorporated for	Inc.
1 Scranton Gas and Water Co.,	"Providence township." Now Scranton city (S. A.)	1854 (a)
2 Dunmore Gas & Water Co.,	Dunmore borough,	1867 (*)
3 Susquehanna Water Co.,	Scranton city,	1902 (*)
4 Olyphant Water Co.,	Olyphant borough,	1889 (*)
5 Dickson City Water Co.,	Dickson city borough,	1889 (†)
6 Capouse Water Co.,	Scranton city,	1895 (†)
7 Blakely Water Co.,	Blakely borough,	1884 (†)
8 Archbald Water Co.,	"Archbald village and vicinity." Now Archbald borough	1875 (†) (b)
9 Consolidated Water S. Co.,	Lackawanna and Susquehanna counties,	1899 (*)
10 Lackawanna Valley Water S. Co.,	Lackawanna and Susquehanna counties,	1897 (‡)
11 Reynshanhurst Water Co.,	"Carbondale city and vicinity",	1900 (‡)
12 Fall Brook & Newton Water Co.,	Carbondale city,	1891 (‡)
13 Oak Ridge Water Co.,	Carbondale city,	1904 (‡)
14 Carbondale Water Co.,	Carbondale township,	1891 (‡)
15 Crystal Lake Water Co.,	Carbondale township,	1867 (‡)
16 Vandling Water Co.,	Fell township,	1893 (‡)
17 Panther Creek Water Co.,	Fell township,	1891 (‡)
18 Fell Water Co.,	Fell township,	1891 (‡)
19 Clinton Water Co.,	Clinton township, Wayne county,	1891 (‡)
20 Mayfield Water Co.,	Mayfield borough,	1892 (‡)
21 Uniondale Water Co.,	Uniondale borough, Susquehanna county,	1893 (‡)
22 Jermyn & Rush Brook Water Co.,	Jermyn borough (merger),	1894 (‡) (c)
23 Rock Cliff Water Co.,	Clifford township, Susquehanna county,	1888 (‡)
24 Winton Water Co.,	Winton borough,	1889 (§) (d)

(*) Stock owned by Scranton Gas and Water Co.
(†) Stock owned by Olyphant Water Co.
(‡) Stock owned by Consolidated Water Supply Co.
(§) One-half of stock owned by Olyphant Water Co.
(a) Providence Gas and Water Co. and Meadow Brook Water Co., merged with Scranton Gas & Water Co. in 1900
(b) Purchased Peckville Water Supply Co. 1894, incorporated 1870 for Blakely township
(c) Merger in 1894 of Jermyn Water Co. and Rush Brook Water Co., incorporated 1884 and 1892 respectively for Jermyn Borough and Rush Brook Water Co. purchased Lackawanna Water Supply Co., chartered in 1893 for Dickson city and later dissolved
(d) Owns land and reservoirs on Grassy Island Creek. Sells water to Olyphant Water Co.
(S. A.) Special act

SOURCE, COLLECTION AND DELIVERY

Supply almost entirely from streams in neighboring hills. For territory lying north of Scranton the watersheds above the mining operations in the upper reaches of the streams draining into the Lackawanna River are quite generally utilized, aggregating about 35 square miles in area, including some of the watershed at headwaters of Tunkhannock Creek, the waters from which are conveyed across the divide by means of tunnels. At extreme northern end of district above Forest City is an area of 33 square miles additional, containing several lakes and a large storage reservoir, which are controlled but used only slightly for supply purposes. This makes a total controlled watershed area north of Scranton of 68 square miles, of which only 35 are utilized. The total storage capacity, exclusive of Lackawanna Creek above Forest City, amounts to 2,056 million gallons, or about 62 million gallons per square mile. The highest development for this district is on Racket Brook, which has 317 million gallons per square mile.

For territory tributary to Scranton there are two streams to the northwest, having about 10.3 square miles of developed watershed,

whereon the total storage is about 816 million gallons, or 79 million gallons per square mile. To the east of Scranton are Roaring Brook and Stafford Meadow Brook watersheds, and a stretch contiguous thereto across the divide normally tributary to the Lehigh River, made available by pumping. These three watersheds combined stretch along both sides of Lackawanna R. R. about 18 miles. They comprise about 82 square miles, having a total storage capacity of 5,192 million gallons, or an average storage of 63 million gallons per square mile. Roaring Brook is developed to 42 million gallons per square mile and Stafford Meadow Brook to 251.

For entire system, exclusive of Lackawanna Creek above Forest City, the average development per square mile is about 64 million gallons, or a total watershed area of about 125.3 square miles, with 8,064 million gallons total storage.

At the northerly end of district above Forest City are 33 square miles of watershed of Lackawanna Creek, at present utilized only to a small extent for water supply purposes, and with storage already partly developed. This includes Stillwater reservoir, capacity approximately 325 million gallons, Carp and Ball ponds, and Dunn, Fiddle and Low lakes, all controlled by the company under the nominal control of the Lackawanna Valley Water Supply Co.

At southerly end of district is projected another 250 million gallon storage reservoir on Griffin Creek, a tributary of Leggett's Creek, which will bring development of latter watershed up to 104 million gallons per square mile.

On Roaring Brook are three projected reservoirs above Elmhurst reservoir, of aggregate capacity of 4,710 million gallons, giving a resulting development of 121 million gallons per square mile.

Venturi meters and recorders give exact amounts of supply and consumption.

In the following tables are shown area and storage capacity of various watersheds and amount obtained from each during 1913, and details of the various reservoirs and the method of delivery of water:

Watershed	Area	Storage Mil. Gals. Total	Storage Mil. Gals. Sq. Mi.	Supply 1913 gallons	How measured
Consolidated Water S. Co.:					
Lackawanna Creek and tributaries(**)	33.0	325.0	----------	None (**)	
Brace Brook,	1.9	3.0	----------	1,300,000	By pitometer
Ray Brook,	0.8	----------	----------	(*)100,000	Guess
Panther Creek,	1.3	----------	----------	100,000	Guess
Racket Brook,	3.6	1,142.0	317	3,100,000	Venturi meter
Reynshanhurst (flowing wells) (†)	----------	----------	----------	270,000	Crown meter
Fall Brook (including Crystal Lake, etc.)	12.3	441.0	----------	1,550,000	Venturi meter
Rush Brook,	4.9	52.0	----------	(‡)	See Aylesworth Lake
Tunkhannock Creek (Chapman Lake)	0.5	304.0	----------	1,400,000	Venturi meter
Aylesworth Creek,	2.9	4.0	----------	1,000,000	Guess
Sources not measured,	----------	----------	----------	447,000	Guess
Olyphant Water Co.:					
White Oak Creek,	1.8	5.0	----------	460,000	Venturi meter
Laurel Run,	1.4	9.0	----------	750,000	Venturi meter
Grassy Island Creek,	3.52	99.0	28	1,690,000	Venturi meter
Scranton Gas & Water Co.:					
Summit Lake Creek,	2.35	816.4	79	2,870,000	Venturi meter
Leggett's Creek,	7.96				
Little Roaring Brook,	5.16	103.0	----------	1,430,000	Venturi meter
Lehigh River,	15.2	80.0	----------	----------	Emergency
Roaring Brook,	50.0	2,117.2	42	(‡)13,460,000	Venturi meter
Stafford Meadow Brook,	11.5	2,892.0	251	3,910,000	Venturi meter
Total,	160.09	----------	----------	33,837,000	

(*) Inadequate in summer. Supplemented by pumping at Forest City Pump Intake

(**)On Lackawanna Creek at Forest City, 40 square miles watershed, there is now under construction a 500,000 gallon intake replacing a previous one from which an auxiliary supply is pumped in summer to supplement these sources

(†)Small section in eastern part of Carbondale City supplied from 4 flowing artesian wells. Water flows into collecting basin and thence to small distributing reservoir (elevation about 1,316). The distributing system is ordinarily gated off from rest of system. System was built by Reynshanhurst Water Co.

(‡)Supplemented by 6 driven wells, yielding 2,000,000 gallons daily.

SOURCES NORTH OF SCRANTON

NORTH OF FOREST CITY—CONSOLIDATED WATER SUPPLY COMPANY

Name	Location	Elevation	Drainage area square miles		Capacity	Storage per Sq. Mi.	Remarks
			Each	Total	Mil. Gals.	Mil. Gals.	
Low, Fiddle and Dunn Lakes and Carp and Ball ponds Stillwater reservoir, ----------	Tributaries of, north of Forest City Lackawanna Creek north of Forest City	1,659	----------	33.0	325.0	----------	Not used at present for water supply purposes except perhaps occasionally to increase flow for pumping stations below.

EAST OF LACKAWANNA RIVER—CONSOLIDATED WATER SUPPLY COMPANY

Forest City and Vandling:							
Brace Brook reservoir, ----------	Brace Brook, ----------	1,782	1.9	1.9	3.0	----------	Twelve inch main to Forest City
Vandling reservoir, ----------	Ray Brook, ----------	1,663	0.8	0.8	0.1	----------	Four inch main to Vandling.
Pump intake, ----------	Lackawanna Creek below junction of Brace Brook	1,470	----------	40.0	0.5	----------	New intake under construction. Auxiliary supply by pumping.
Carbondale:							
Panther Creek res. (Dist.), -------	Panther Creek, ----------	1,623	1.3	1.3	0.2	----------	Four inch main to Simpson
No. 7 storage reservoir, ----------	Racket Brook, ----------	1,809	0.6	----------	31.0	----------	Discharge through creek bed into No. 4 reservoir
No. 4 storage reservoir, ----------	Racket Brook, ----------	1,743	2.3	----------	264.2	----------	Discharge through creek bed to Brownell 24″ main branching into 14″ and 12″ to east side of Carbondale & Simpson
Brownell reservoir (Dist.), -------	Racket Brook, ----------	1,583	----------	3.6	846.9	----------	Supplied by gravity from four flowing artesian wells
Large Reynshanhurst (storage),--	3rd Ward City of Carbondale	----------	----------	----------	0.4	----------	
Small Reynshanhurst (Dist.), ----	----------	1,316	----------	----------	0.1	----------	Supplied from storage reservoir

WEST OF LACKAWANNA RIVER—CONSOLIDATED WATER SUPPLY COMPANY

Name	Location	Elevation	Drainage area square miles		Capacity	Storage per Sq. Mi.	Remarks
			Each	Total	Mil. Gals.	Mil. Gals.	
Carbondale:							
Crystal Lake,	Fall Brook,	1,745	0.9		437.0		Discharges through stream bed to Fall Brook reservoir
Newton Lake and Mud Pond (proposed)	East Branch of Tunkhannock Creek	1,645	1.1		not known		To be diverted by tunnel through divide
Fall Brook reservoir (Dist.),	Fall Brook,	1,386	11.2	12.2	4.0		Fourteen inch reducing to 12" into west side of Carbondale
Jermyn and Mayfield:							
Chapman Lake (Dist.),	East Branch of Tunkhannock Creek	1,595	0.5	0.5	304.0		Fourteen inch main through tunnel reducing to 10" connecting into 12" from Rush Brook
Heart Lake,	Rush Brook,	1,551	0.5		46.0		Discharges through stream bed into Rush Brook reservoir
Rush Brook reservoir (Dist.),	Rush Brook,	1,235	4.4	4.9	6.0		12" and 8" mains to Jermyn
Edgerton reservoir (Dist.),	Aylesworth Creek,	1,282	2.9	2.9	4.2		Eight inch main to Mayfield

EAST OF LACKAWANNA RIVER—OLYPHANT WATER COMPANY

Archbald:							
White Oak reservoir (Dist.),	White Oak Creek,	1,274	1.8	1.8	4.8		12" main to Archbald
Laurel Run reservoir (Dist.),	Laurel Run,	1,250	1.4	1.4	9.2		10" main to Archbald
Olyphant, Dickson, Throop Blakely and Winton:							
Olyphant No. 3 reservoir (storage)	Grassy Island Creek,	(*)1,467	0.7		39.6		Discharges into stream bed
Olyphant No. 2 reservoir (storage)	Grassy Island Creek,	1,344	2.25		57.6	28.0	Discharges into stream bed
Olyphant No. 1 reservoir (dist.),	Grassy Island Creek,	1,218		3.52	1.8		12" main into Jessup

(*) The supply from Grassy Island Creek is owned by the Winton Water Co., only one-half of its capital stock being owned by the Olyphant Water Co., one of the subsidiaries of the Scranton Gas and Water Co. It sells water to the Olyphant Water Co. and does not have any distributing system of its own.

SOURCES WEST OF SCRANTON

SCRANTON GAS AND WATER COMPANY

Name	Location	Elevation	Drainage area square miles		Capacity	Storage per Sq. Mi.	Remarks
			Each	Total	Mil. Gals.	Mil. Gals.	
Leggett's Creek:							
Summit Lake reservoir (storage),	Summit Lake Creek,	1,381	0.96		259.0		Discharges through creek bed to Maple Lake
Maple Lake (storage),	Summit Lake Creek,	1,248			4.0		Discharges through creek bed into Larue intake
Larue Intake reservoir,	Summit Lake Creek,	1,156		2.35	0.7	112.0	Eighteen inch main connects into 24" main from Griffin intake
Griffin reservoir (storage),	Griffin Creek,	1,356	3.21		549.0	171.0	Discharges through creek bed into Griffin intake
Griffin Intake (filter plant) (†),	Griffin Creek,		4.75	7.96			Twenty-four inch main from intake through filter plant reducing to 20", 16" and 12" to northwest side of city for Providence High Service
Providence high service reservoir (Dist.)	Along Leggett's Creek,	1,029		10.31	816.4	79.0	
Providence Fountain reservoir (Aeration)	Along Leggett's Creek,	994			0.9		Discontinued
Providence low service reservoir (Dist.)	Along Leggett's Creek,	993			1.3		Discontinued

(†) Griffin reservoir, about six miles north of the city, discharges through the natural creek bed into Griffin intake; also Summit Lake reservoir discharges through the natural creek bed into Larue intake and thence via 18-inch line to 24-inch line near Griffin intake from which a 24-inch line extends 2,700 feet to the filter plant in Chinchilla, described as follows: two sedimentation basins, 167,000 gallons; time of sedimentation, 40 minutes; six units mechanical filter, 6,000,000 gallons capacity; clear water basin, Providence reservoir; wash water tank, 150,000 gallons capacity, 36 feet high; two wash water pumps, 335 gallons per minute.

SOURCES SOUTHEAST OF SCRANTON

SCRANTON GAS AND WATER COMPANY

Name	Location	Elevation	Drainage area square miles		Capacity	Storage per Sq. Mi.	Remarks
			Each	Total	Mil. Gals.	Mil. Gals.	
Little Roaring Brook:							
Dunmore No. 3 reservoir (storage),	Little Roaring Brook,	2,021	0.13		18.0		Discharge through stream bed to No. 4 reservoir
Dunmore No. 4 reservoir (storage),	Little Roaring Brook,	2,014	0.25		10.0		Discharges through stream bed to No. 1 reservoir
Dunmore No. 1 reservoir (dist.),	Little Roaring Brook,	1,212		5.16	103.3	20.0	Two 12″ and one 24″ mains to Dunmore service
Dunmore No. 2 high service reservoir (dist.)	2nd Ward Dunmore Borough,	1,187			1.1		Out of service
Lehigh River:(*)							
Lehigh pump reservoir,	Lehigh River,	1,883	15.2	15.2	80.0	5.25	Used only for emergency. Pumped over divide into Roaring Brook through 24″ main
Roaring Brook:							
Lake Henry,	Lake Henry Creek,	1,906	0.9		204.9		Discharges through creek bed into Roaring Brook
Oak Run or Curtis reservoir,	Oak Run,	1,496	2.4		418.0		Discharges through creek bed into Elmhurst reservoir
Elmhurst reservoir,	Roaring Brook,	1,425	37.25		1,393.0		Discharges through creek bed into No. 7 reservoir and by 36″ reducing to 30″ main to Lake Scranton with cross connections to No. 7 reservoir and supply mains
No. 7 distributing reservoir,	Roaring Brook, (†)	1,059	50.0	50.0	2,117.2	42.0	
Big No. 6 reservoir (storage),	2nd Ward Dunmore,	1,151			2.6		Out of service
Little No. 6 high service reservoir (dist.)	2nd Ward Dunmore,	1,151			0.1		Out of service
Stafford Meadow Brook:							
Hazard Pond,	Stafford Meadow Brook,						Discharges through stream bed into Williams Bridge reservoir
William Bridge high service reservoir (dist.)	Stafford Meadow Brook,	1,361	5.0		342.6		Eighteen inch main branching into 20″, 12″ supply High service, also No. 7 reservoir in emergency

Lake Scranton (Stor. & Dist.),	Stafford Meadow Brook,	1,282	1.0	6.0	2,517.8	----------	Forty-eight inch main through tunnel reducing to 36", supplies Low service by means of reducing valves. Can supply No. 7 or High service
No. 5 reservoir (Dist.),	Stafford Meadow Brook,	922	5.5	11.5	31.9	251.0	Eighteen inch main supplies South Scranton low service

(*) The auxiliary supply on the Lehigh River about 20 miles east of the city was installed in 1895 during a threatened scarcity of water before Lake Scranton was built. It was operated only a few weeks, the last time being in 1909, and consists of an 80,000,000 gallon reservoir, from which a 10,000,000 gallon compound duplex Worthington pump forces the water over the divide into the headwaters of Roaring Brook. There are two 150 hp. fire-tube boilers and 6,400 feet of 24" pipe.

(†) Six driven wells discharge by air lift 2,000,000 gallons daily into No. 7 reservoir. Air compressors driven by Pelton wheels on by-pass from 30" main from Elmhurst reservoir. Two compressors and six 80 hp. boilers are auxiliary to water power plant. Plant is 5 miles above reservoir No. 7.

DISTRIBUTION

Supply delivered directly from nearby watersheds, except that in the Olyphant Division, south of Archbald and north of Scranton, over half of supply comes through one 16-inch main and one 18-inch main from Scranton. This is shown in table following, under "Consumption." Services: Aside from Scranton, which is described separately, Carbondale, Throop and Dunmore boroughs have two services, high and low, on account of range in elevations.

Distributing mains, hydrants and regulating valves are shown in the following table:

Size of mains (inches)	Olyphant division	Consolidated division	Scranton division
	Archbald, Winton, Olyphant, Dickson City and Throop and Blakely	Forest City, Vandling, Browndale, Carbondale Twp., Carbondale City, Fell Twp., Mayfield Borough and Jermyn Boro.	Scranton and Dunmore
1	----------	----------	0.9
2	4.0	5.7	1.5
1½	----------	0.2	----------
3	6.5	6.4	4.8
4	30.0	36.5	56.6
5	----------	0.3	0.2
6	27.0	26.3	119.0
8	4.8	9.1	6.5
10	4.2	3.9	6.5
12	8.1	7.7	18.9
14	----------	2.5	1.1
16	2.3	1.7	14.8
18	0.9	----------	8.8
20	----------	----------	4.6
24	----------	0.5	7.4
30	----------	----------	7.8
36	----------	----------	8.5
48	----------	----------	1.0
Total,	87.8	100.8	268.9
Total for three divisions,	----------	----------	457.5
Pressure reducers,	2	6	16
Check valves,	3	----------	17
Municipal hydrants	200	197	855
Company,	20	9	87

Principally 4-inch barrels, probably three-fifths or more having 4-inch connection to main.

Pressures as follows: Forest City and Vandling, 70 to 105 pounds; Carbondale (center), 100 day to 120 night; Jermyn and Mayfield, 100 pounds; Archbald, 135 to 140 pounds; Olyphant, 95 day to 105 night; Dickson, 100 day to 110 night; Throop, 110 pounds; Blakely, 95 day to 105 night; Winton (at station), 95 day to 100 night.

CONSUMPTION

Following table shows consumption by districts, populations of constituent communities and sources from which supply is received:

Place	1910 Population	Consumption 1913	How measured	Per capi.	Principal source and amounts each
Consolidated W. S. Co.:					
Forest City (Susquehanna county)	5,749	1,400,000		244	1,300,000 Brace Brook 100,000 Roy Brook
Vandling borough,	985				
Browndale and two other small villages	300		Pitometer,		
Carbondale township,	1,635				1,550,000 Fall Br. 270,000 Reyn.
Carbondale city,	17,040				
Fell township,	4,353	5,020,000	Reynshanhurst by Crown meter 270,000 balance by Venturi	213	*3,100,000 Racket Br. 100,000 Panther Creek
Part of Mayfield borough (Simpson village)	500				
Jermyn borough,	3,158		Part Chapman Lake by Venturi	450	1,400,00 Chapman Lake
Mayfield borough (part)	3,162	2,847,000			1,000,000 Rush Br. & Ayles. Lake (*)447,000 Racket Br.
Olyphant W. Co.:					
Archbald borough,	7,194	1,210,000	Venturi,	168	1,210,000 White Oak & Laurel Runs
Olyphant borough,	8,505				
Dickson borough,	9,331				
Throop borough,	5,133	2,171,000		113	See Scranton Gas & Water Co.
Blakely borough,	5,345				
Winton borough,	4,980s	1,690,000	Venturi,		Grassy Island Cr.
Scranton Gas & W. Co.:					
Scranton city,	129,867	19,499,000	Venturi,	132	Little Roaring Br. 1,430,000 Roaring Brook, 13,460,000 Stafford Meadow Br., 3,910,000 Leggett's Creek, 2,870,000 Deduct from total of above, 2,171,000 for Dickson, Olyphant, Throop, etc. delivered from Scranton through 16" main
Dunmore borough.	17,615				
Total,	224,852	33,837,000			

(s) Portion supplied. Total population, 5,280.
*1915 consumption add 6% would give 36,000,000 gallons daily.

Of the total consumption 20% is used by collieries and 82% for all industrial and commercial purposes, including collieries, thus leaving 18% as the amount used for domestic purposes.

Metering of domestic services was begun in 1908 and all consumers in Scranton and Dunmore, Throop and Dickson are metered. In the other places only industrial and commercial consumers are metered.

Previous to metering of consumption of Scranton and Dunmore the maximum reached 30,000,000 gallons daily in the summer of 1908; since meters were installed a reduction of approximately 10,000,000 gallons has resulted.

SCRANTON

About 80% of water supply for Scranton enters from the east, principally from Roaring Brook, and in smaller amount from Stafford Meadow Brook, while at opposite side of city the Leggett's Creek supply (the only one of entire Scranton system that is filtered) from the northwest enters. Nearly all the remainder of Scranton water is purified either with hypochlorite of lime or liquid chlorine.

There are five services to suit the elevations of different sections of the city, separated by closed gates and regulating valves. These are: (1) Main low service. Area about 1 square mile, including mercantile and manufacturing districts on east side of Lackawanna Creek, and on west side directly opposite business section and extending southerly. Service from Reservoir No. 7, on Roaring Brook, supplemented from Lake Scranton by use of regulating valves. Elevations from 680 to 1,000. The district can be fed direct from Lake Scranton which would give pressures in congested district as high as 125 pounds, or 220 pounds if direct pressure is used. See table for normal pressures. (2) South Scranton low service. On east side and adjacent to river south of Roaring Brook and the mercantile district, and enveloped by main low service. Area about 0.75 square mile, largely residential. Supply from Reservoir No. 5 and by regulating valve on branch from Lake Scranton. Elevations from 670 to 790. (3) High service, covers two detached residential areas totaling about 1 square mile in eastern and western parts of city. Supplied from Williams Bridge reservoir through regulating valve, or may be supplied from Lake Scranton. Elevations from 875 to 1,040. (4) Providence service, covers principally area of about 3 square miles, largely residential, with coal mines, factories and stores interspersed. Supplied from Providence reservoir on Leggett's Creek. Elevations range from 700 to 950. (5) Lake Scranton service, covers a very small area in the southeastern part adjoining the high service. Supplied from Lake Scranton.

Pressures in the various districts are:

District	Pressure, pounds per square inch with hydrant outlets closed		
	Average	Minimum	Maximum
Main low service,	90	21	147
Main low service through regulating valves,	78	57	101
Congested value,	75	60	80
South Scranton low service,	72	43	99
High service,	76	47	157
Providence service,	97	34	143
Lake Scranton service,	102	102	102
Whole city,	82	21	157

CONSUMPTION

The total average daily consumption for 1913 was 18,090,000 gallons, divided among the various services approximately as follows:

Main low service,	11,096,000 gals.
South Scranton, low service,	935,000 gals.
High service,	1,595,000 gals.
Providence service,	2,819,000 gals.
Lake Scranton service,	1,645,000 gals.
Totals,	18,090,000 gals.

CITY WATER COMPANY OF SCRANTON

This company supplies newly devoloped section of Scranton in eastern corner of Tenth and Twelfth wards. Construction begun 1906; first supply furnished 1909. Water obtained by pumping from 6-inch well, 275 feet deep, located just above territory supplied, into 2,500 gallon tank and distributed through 2-inch main. One electric 150 g. p. m. pump.

About 14 families supplied; stated average daily consumption 5,000 gallons; no means of measuring.

This company owns watershed on South Branch of Roaring Brook; proposes constructing reservoir and works to supply present and additional territory.

SHAMOKIN BOROUGH AND COAL TOWNSHIP, NORTHUMBERLAND COUNTY.

THE ROARING CREEK WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Shamokin,	19,588	1,386	20,985x
Coal township,	16,105	3,632	17,900b

LOCATION

Southeastern Northumberland County, along Shamokin Creek; on Shamokin Division of Pennsylvania R. R., Shamokin Division of Philadelphia & Reading Ry., and connected to Treverton and Mt. Carmel by electric railway lines.

INDUSTRIES

Coal mining.

WATER SUPPLY

Roaring Creek Water Co., incorporated 1884 for Shamokin Borough, leases and operates Anthracite Water Co., of Coal Township, incorporated 1885, and Shamokin Water Co., incorporated 1866 for Shamokin, which are controlled by same stockholders, who also control and operate Bear Gap Water Co., supplying Mt. Carmel Township by separate system.

SOURCE AND COLLECTION

(1) South Branch of Roaring Creek, intake 8 miles northeast of borough, 4 miles above that of Bear Gap Water Co. and 3 miles below that of Wyoming Valley Water Supply Co.; watershed area 3.49 square miles. Intake dam forms reservoir No. 6, capacity 565,360,000 gallons, used as storage when stream flow is sufficient; and an intake just above, called No. 7 reservoir, is used by-passing No. 6. Elevation No. 6 is 1049, and of lower end of borough 720. Just below No. 6 is reservoir No. 5, capacity 6,200,000 gallons at elevation 1012.

(2) Trout Run, tributary of Shamokin Creek; four dams about 1 mile north of borough, forming following reservoirs:

No.	Location	Elevation	Capacity (gallons)
1	Near mouth,	670	408,000
2	Just above No. 1,	688	726,000
3	0.75 mile above No. 2,	771	1,564,000
4	0.75 mile above No. 3,	876	35,289,000
	Total,		37,987,000

(3) Eagle Run, tributary of Shamokin Creek. Intake dam about 0.5 mile above mouth and 2 miles northwest of borough; has 8-inch gravity main, 1 mile long, to reservoir No. 1 on Trout Run.

DISTRIBUTION

(1) By gravity through two mains from No. 6 reservoir. Older line is 16-inch, passing through two tunnels, one 900 feet long and other 3,700 feet long, to get over ridge; reduces to 14-inch. New line is 18-inch paralleling the old, passes through tunnels 800 and 3,900 feet long, changes to 20-inch and again to 24-inch. Two 18-inch cross-overs provided between the two lines before reaching long tunnels. Delivery mains as follows:

Size (inches),	24	20	18	16	14	Total
Length (miles),	0.68	3.57	4.66	6.00	3.68	18.59

(2) By gravity from reservoir No. 4 to borough through delivery mains as follows:

Size (inches),	16	14	12	Total
Length (miles),	0.12	1.03	1.06	2.21

(3) By gravity from reservoir No. 3 to Cameron colliery just northwest of borough, through 10-inch main reducing to 8-inch, 1.1 miles long. Pressures 30 to 60 pounds. Reservoirs Nos. 1 and 2 are used only in drought, when water is pumped into mains from pumping station No. 1 at reservoir.

A high service distributing system supplies in Ferndale and Fairview, an extension of western part of borough, in Coal Township. Pumping station near southwestern corner of borough contains two

electrically-driven centrifugal pumps, one used as auxiliary, having suctions in 10-inch supply main, discharge through 10-inch main to wooden standpipe 1,800 feet west of pumping station. Pressures 30 to 120 pounds. Distributing mains (exclusive of supply mains):

Size (inches),	14	12	10	8	6	4	3 & smaller	Total
Length (miles),	1.09	1.33	3.84	7.24	12.83	11.07	3.50	40.90
Per cent.,	2.7	3.2	9.4	17.7	31.4	27.0	8.6	100

One hundred twenty-eight fire hydrants, 4-inch and 6-inch, 5 being private.

CONSUMPTION

Supply to 35,000 people; 4,254 taps, in Shamokin, its eastern extension known as Boydtown, Johnson City and Marshallton, and its western extension Edgeweed, Fairview, Ferndale and Uniontown.

Stated daily consumption between 4,000,000 and 5,000,000 gallons, approximately 65% domestic and 35% industrial. No means of measurement. Supplies following collieries, all in Coal Township, near borough: Big Mountain, Burnside, Henry Clay, Sterling, Cameron, Luke Fidler, Buck Ridge No. 2, Corbin, Excelsior; private supply also, at Excelsior.

SHENANDOAH BOROUGH, SCHUYLKILL COUNTY

MUNICIPAL WATER WORKS AND SHENANDOAH CITIZENS WATER COMPANY

Population 1910 census, 25,774; increase since 1900, 5,453. Estimated 1915, 28,649x

LOCATION

Northern Schuylkill County, along Shenandoah Creek, tributary of Mahanoy Creek; on Pennsylvania R. R., Philadelphia & Reading Ry., Lehigh Valley R. R., and connected to Mahanoy City and Ashland by Schuylkill Electric Ry.

INDUSTRIES

Coal mining; two breweries, overall factory and packing house.

WATER SUPPLY

Municipal works built in 1895. Shenandoah Citizens Water & Gas Co., incorporated 1870.

MUNICIPAL WATER WORKS

SOURCE AND COLLECTION

Davis, Spiese and Ulshafer runs, tributaries of Catawissa Creek, by pumping; first about 6 miles northeast of borough and two latter about 5 miles further to northeast; all across the divide. Pumping station near Davis Run reservoir 0.33 mile above mouth of run; capacity of reservoir 20,000,000 gallons. Small intakes on Spiese Run 1,400 feet from mouth, and Ulshafer Run, 800 feet from mouth, feed this reservoir through 25,182 feet of 8-inch pipe along Catawissa Creek, with total fall of 238 feet.

Pumping equipment two Jeansville duplex pumps, 1,440,000 gallons each, three 200 hp. boilers and an air compressor pumping from a 10-inch and 8-inch driven well near reservoir. Pumps work against head of 884 feet, through about 3 miles of 12-inch pipe to 1,200 feet beyond the summit and 2,000 feet of 10-inch and 1,950 feet of 8-inch to distributing reservoir. A portion of the 12-inch force main is in duplicate, the second line, 8,500 feet long, taking a longer route and at an elevation which reduces the lift by 71 feet. The old line can be used in emergencies increasing total lift, in such event, to 955 feet. Distributing reservoir, capacity 5,200,000 gallons, on hillside above and northeast of borough, just above reservoir of Shenandoah Citizens Water & Gas Co. on Fowler Run, a tributary of Shenandoah Creek. A spring east of reservoir flows about 5 months a year through 0.5 mile of 12-inch pipe to reservoir.

DISTRIBUTION

Distributing reservoir can be by-passed for direct pumping; 12-inch gravity main from reservoir to borough; pressures 65 to 110 pounds, average 70 pounds; 8 miles distributing mains, 4-inch to 12-inch; 78 fire hydrants with 4-inch and 6-inch connection to main.

CONSUMPTION

Supplies 20,000 people; 5,140 taps, 210 meters. Average daily consumption, 1,500,000 gallons; maximum 2,000,000 gallons. Supplies Wm. Penn colliery of Susquehanna Coal Co. and in dry weather Locust Mountain Coal Co. and Home Brewery.

SHENANDOAH CITIZENS WATER CO.

SOURCE AND COLLECTION

Three small tributaries of Shenandoah Creek and one spring by gravity. (1) Kehley Run; five reservoirs about 1 mile north of borough. Capacities of reservoirs starting with upper: No. 1, 30,000,000 gallons; No. 2, 16,682,000 gallons; No. 3, 4,550,000 gallons; No. 4, 12,505,000 gallons; No. 5, 1,911,000 gallons; total, 65,648,000 gallons.

(2) Fowler Run; one reservoir, capacity 1,059,000 gallons, about 1 mile northeast of borough, just below municipal reservoir.

(3) Bairds Run; one reservoir, capacity 250,000 gallons, in northwestern part of borough, on hillside.

(4) Cold Spring, just northwest of borough.

The company also buys considerable water from Girard Water Co.

DISTRIBUTION

From (1) by gravity through 10-inch main from Reservoir No. 4, with 6-inch connection to reservoir No. 5. From (2) by gravity through 4-inch main to collieries. From (3) by gravity to Home Brewery. From (4) by gravity to distributing system. Distributing system has 6-inch laterals reducing to 3-inch; pressures 50 to 90 pounds.

CONSUMPTION

Supplies 1,000 families. Average daily consumption 1,250,000 gallons; one-quarter industrial.

Supplies Cambridge Coal Co. colliery, W. H. Nieswenter colliery, two breweries, packing house, H. H. Smith & Co., washery, overall factory, ice plant and P. R. R. tank at station.

SHICKSHINNY BOROUGH AND MOCANAQUA VILLAGE, LUZERNE COUNTY

SHICKSHINNY WATER COMPANY.

	Population 1910 census	Increase since 1900	Estimated 1915
Shickshinny,	1,917	461	2,150b
Mocanaqua,	about 300		

LOCATION

West central Luzerne County, on west bank of North Branch of Susquehanna River, at mouth of Shickshinny Creek; on Delaware, Lackawanna & Western R. R.

INDUSTRIES

Silk mill; coal mines in Mocanaqua.

WATER SUPPLY

Shickshinny Water Co., incorporated 1883 for Shickshinny Borough.

SOURCE AND COLLECTION

From Little Shickshinny Creek; intake 1 mile west of borough; drainage area about 4 square miles. Water soft.

DISTRIBUTION

By gravity from intake through 8-inch main; pressures from 45 to 100 pounds. Distributing mains as follows:

Size (inches),	12	8	6	4	3	2	Total
Length (miles),	.02	.76	1.48	2.10	.41	.80	5.57

Twenty-two fire hydrants, 4-inch.

CONSUMPTION

About 1,500 population supplied; 400 taps. Consumption not measured, estimated at 100,000 gallons per day, 75,000 industrial. No meters.

INDUSTRIAL SUPPLIES

The West End Coal Co. has private supply from two sources, one by gravity from intake on Turtle Run, the other by pumping from Susquehanna River.

SIMPSON VILLAGE, LACKAWANNA COUNTY

BELMONT WATER COMPANY

LOCATION

Northern Lackawanna County, in Fell Township, on Lackawanna River; on Erie, Delaware & Hudson and New York, Ontario & Western railroads.

INDUSTRIES

Coal mining.

WATER SUPPLY

Most of domestic, and part of industrial supply furnished by Consolidated Water Supply Co., included in description of the Lackawanna Valley system under "Scranton." The Belmont Water Co., incorporated 1901 for Fell Township, furnishes supply entirely for industrial purposes; controlled by interests of the Carbondale Machine Co.

SOURCE AND COLLECTION

From springs and an artesian well rising in natural gulch at foot of Moosic Mountain, 0.5 mile east of Simpson. Water collected in 50,000,000 gallon reservoir formed by dam across gulch.

DISTRIBUTION

By gravity from reservoir through 10-inch, reducing to 8-inch, pipe; pressures 40 to 60 pounds; 6,300 feet distributing mains, 10 to 4-inch; 5 fire hydrants.

CONSUMPTION

Entirely industrial; principal consumers are Carbondale Machine Co., Erie R. R., Empire Silk Co., Klots Throwing Co., Black Diamond Coal Co., Fuin Coal Co., New York, Ontario and Western R. R. and the American Welding Co. Average daily consumption 200,000 gallons.

TOMHICKEN (SUGARLOAF TWP.), LUZERNE COUNTY

WYOMING VALLEY WATER SUPPLY COMPANY
(Lehigh Valley Coal Company)

Estimated 1915 population, 500a

LOCATION

Southern Luzerne County, Sugarloaf Township, Black Creek Valley; on Erie Division of Pennsylvania R. R. and Lehigh Valley R. R. Range of elevations 152.

INDUSTRIES

Colliery of Coxe Bros. & Co.

WATER SUPPLY

Hazleton Department of Wyoming Valley Water Supply Co., subsidiary of Lehigh Valley Coal Co. (Complete description of this company under Hazleton, this section.) Leased Tomhicken Water Co., incorporated 1893 for Black Creek Township.

SOURCE AND COLLECTION

(1) Stable Run, small tributary of Black Creek from south; intake southwest of village, at elevation 1,308; watershed area 0.2 square mile. Water soft.

(2) Rock Spring, about 0.5 mile southeast of village, at elevation 260. Water soft.

DISTRIBUTION

From (1) by gravity through 2-inch pipe 1,000 feet to several houses near Black Creek; a private system.

From (2) by gravity through 3-inch pipe to 6,000 gallon tank at breaker, from which an electrically operated pump lifts water to 10,000 gallon tank on hill in village, through 2-inch pipe 1,525 feet long. Pressures 10 to 25 pounds; 1,930 feet of 1-inch pipe; 1 fire hydrant.

CONSUMPTION

Supplies 425 people; 10 domestic and 1 industrial taps. Stated daily consumption, 6,000 gallons, 75% domestic and 25% industrial. No means of measurement.

WAPWALLOPEN, (CONYNGHAM TWP.), LUZERNE COUNTY

CITIZENS WATER CO. OF WAPWALLOPEN

Estimated population 1915, 150

LOCATION

In southwestern Luzerne County, on east bank of Susquehanna River; on Pennsylvania R. R.

INDUSTRIES

Residents principally railroad employees.

WATER SUPPLY

Supply from Citizens Water Co. of Wapwallopen. Nearly all consumers are stockholders.

SOURCE AND COLLECTION

Supply from several springs in hill northeast of village, at elevation 100 feet above same, collected into two small reservoirs of 10,000 gallons combined capacity. Water soft.

DISTRIBUTION

By gravity through 3-inch main. About 1 mile of supply and distributing pipe. No fire hydrants.

CONSUMPTION

About 135 population supplied; 47 taps. Consumption not known; assuming 30 gallons per capita, would be 4,000 gallons daily.

WILKES-BARRE, PITTSTON, TWENTY-SEVEN BOROUGHS AND MANY VILLAGES IN WYOMING AND SOUTHERN LACKAWANNA VALLEYS, LUZERNE AND LACKAWANNA COUNTIES

SPRING BROOK WATER SUPPLY COMPANY

Aggregate population 1910 census, 275,031; estimated 1915, 320,000

	Population 1910 Census
Lackawanna Valley:	
Scranton (Hyde Park and Bellevue),	2,000
Taylor Borough (includes Pine Village),	9,060
Old Forge Borough (includes Austin Heights and Sibley),	11,324
Pittston Township (includes Cork Lane and Browntown and Dupont) (part),	5,300
Hughestown Borough,	2,024
Moosic Borough (includes Minooka and Greenwood),	3,964
Avoca Borough,	4,634
Duryea Borough,	7,487
Wyoming Valley, north of Susquehanna River:	
Pittston City,	16,267
West Pittston Borough,	6,848
Exeter Borough,	3,537
Wyoming Borough,	3,010
West Wyoming Borough,	1,621
Swoyerville Borough (includes Maltby and Dickville),	5,396
Luzerne Borough,	5,426
Plymouth Township (includes Courtdale, West Nanticoke and Avondale Villages),	3,374
Pringle Township,	1,000
Forty Forty Borough,	2,353
Kingston Borough,	6,449
Dorranceton Borough,	4,046
Edwardsville Borough,	8,407
Larksville Borough (includes Lowertown),	9,288
Plymouth Borough,	16,996
Wyoming Valley, south of Susquehanna River:	
Yatesville Borough,	573
Jenkins Township (includes Port Griffith and Inkerman) (part),	2,500
Laflin Borough,	528
Plains Township (includes Plains, Plainsville, Midvale and Hudson villages)(part),	7,000
Miners Mills Borough,	3,159
Parsons Borough,	4,338
Wilkes-Barre City,	67,105
Wilkes-Barre Township,	4,000

	Population 1910 Census
Ashley Borough,	5.601
Hanover Township,	6,965
Sugar Notch Borough,	2,439
Warrior Run Borough,	1,251
Newport Township (includes Glen Lion, Alden, Wanamie and Lee Mine villages),	9,200
Fairview Township (railroad supplies),	894
Laurel Run Borough (Georgetown part in Wilkes-Barre Township),	790
Nanticoke Borough (includes Hanover),	18.877
Total population, 1910 census,	275,031
Estimated population, 1915,	320,000

LOCATION

The Wyoming Valley extends in a northeasterly and southwesterly direction for about 16 miles along the North Branch of the Susquehanna, between mountain ridges from 1,000 to 1,200 feet in elevation above the river and about 6 miles apart. The populated area supplied by the Spring Brook Water Supply Co., is about 4 miles wide, with southerly end of Scranton, known as Hyde Park, and Pittston at the north, in Lackawanna County, and Nanticoke and Glen Lyon, in Luzerne County, at the south, between which is Wilkes-Barre, the seat of Luzerne County.

INDUSTRIES

Following are the more important places and their industries:

Wilkes-Barre—Axle works and lace curtain factories (each largest of the kind in United States), wire works, rope, locomotive, special machinery and silk throwster plants.

Pittston—Machine works, knitting and underwear mills.

Plymouth—Mine drill and mine squib works, silk throwster and knitting mills.

West Pittston—Machine and cut-glass works, planing mills, silk throwster and underwear mills.

Nanticoke—Silk throwster mills.

Kingston—Adding machine factory and silk throwster mills.

WATER SUPPLY

The Spring Brook Water Supply Co., incorporated 1896 for counties of Lackawanna and Luzerne. This company has brought under its financial control and management all the active companies chartered for this territory, 42 in number. Four other charters taken out in this district have become void through merger or lapse. The charters covered by the Spring Brook Water Supply Co., are shown in the following table:

Name of Company	Incorporated for	Year Inc.
	LACKAWANNA COUNTY	
Peoples Water Co. of Scranton,	Scranton City,	1889(*)
Bellevue Water Co.,	Bellevue now in city, formerly Lacka. Twp.,	1889(*)
Minooka Water Co.,	Lacka. Twp. 1st class, Minooka Village,	1888(*)
Taylorville Water Co.,	Taylor Borough, formerly Taylorville,	1886(*)
Rendham Water Co.,	Old Forge Borough, formerly Rendham Village,	1888(†)
Old Forge Borough Water Co.,	Old Forge Borough,	1901(*)
Moosic Water Co.,	Moosic Borough, formerly Moosic Village, Lacka. Twp.	1886(*)
Central Colliery Water Co.,	Moosic Borough,	1901(†)
	LUZERNE COUNTY	
Spring Brook Water Co.,	Avoca Borough, formerly Pleasant Valley Borough,	1884(*)
Avoca Borough Water Co.,	Avoca Borough,	1901(†)
Valley Water Co.,	Duryea Borough, formerly Marcy Township,	1889(*)
Marcy Township Water Co.,	Duryea Borough, formerly Marcy Township,	1901(†)
Hughestown Borough Water Co.,	Hughestown Borough,	1901(†)
Peoples Water Co. of Pittston,	Pittston City, formerly Pittston Borough,	1889(*)
Pittston City Water Co.,	Pittston City,	1901(†)
Pittston Township Water Co.,	Pittston Township, 2nd class,	1901(†)
West Side Water Co.,	West Pittston Borough,	1877(*)
Yatesville Borough Water Co.,	Yatesville Borough,	1901(†)
Laflin Water Co.,	Laflin Borough,	1889(†)
Jenkins Township Water Co.,	Jenkins Township, 2nd class,	1901(†)
Wyoming Water Co.,	Wyoming Borough,	1889(*)
Forty Fort Water Co.,	Forty Fort Borough,	1891(*)
Clear Brook Water Co.,	Kingston Township, 2nd class (no people supp.),	1889(*)
Plains Township Water Co.,	Plains Township, 1st class,	1901(†)
Plainsville Water Co.,	Plains Township, 1st class,	1890(*)
Miners Mills Water Co.,	Miners Mills Borough,	1890(*)
Parsons Water Co.,	Parsons Borough,	1890(*)
Wilkes-Barre Water Co.,	Wilkes-Barre City, formerly Wilkes-Barre Borough,	1859(*)
Crystal Spring Water Co.,	Wilkes-Barre Township, 1st class,	1866(*)
West Side Water Co.,	Dorranceton Borough,	1888(*)
Citizens Water Co.,	Dorranceton Borough,	1889(*)
Mountain Brook Water Co.,	Kingston Borough,	1889(*)
Luzerne Water Co.,	Luzerne Borough,	1889(*)
Tobys Creek Water Co.,	Luzerne Borough,	1890(*)
Edwardsville Water Co.,	Edwardsville Borough,	1889(*)
Kingston Water Co.,	Edwardsville Borough,	1905(*)
Plymouth Water Co.,	Larksville Borough, out of Plymouth Township,	1875(*)
Shawnee Water Co.,	Plymouth Borough,	1889(*)
Hanover Water Co.,	Hanover Township, 1st class,	1885(*)
Nanticoke Water Co.,	Nanticoke Borough,	1882(‡)
Harvey Lake Water Supply Co.,	Valley of Wyoming, Luzerne County,	1896(*)
North Mountain Water Supply Co., (The)	County of Luzerne,	1897(*)
Spring Brook Water Supply Co.,	District composed of Luzerne and Lackawanna Counties	1896(*)

(*) Owned by Spring Brook Water Supply Co., including North Mountain Water Supply Co.
(†) Owned by North Mountain Water Supply Co.
(‡) Leased to North Mountain Water Supply Co.

SOURCE, COLLECTION AND DELIVERY

Practically all of the population is supplied with surface water taken from upper stretches of streams above main mining operations, where comparatively free from pollution. Water soft.

The two largest watersheds used are those of Spring Brook and Harvey Creek. Smaller watersheds stretch continuously in narrowing dimensions southward from Spring Brook along easterly side of river. On the west side from Pittston, southerly for about 7 miles, streams are unutilized. Opposite the northern boundary of Wilkes-Barre, and extending south and west, are the developed watersheds of Harvey Creek and a branch of Toby Creek. Extensive reforesting is being done on the company's lands in these last mentioned watersheds.

There are eleven general sources of supply as follows, arranged from northeast to southwest:

Watershed	Drainage area	Storage		Estimated minimum daily yield		
		Total	Per Sq. Mi.	Pres. Level		Possible future development
				Total	Per Sq. Mi.	
	Sq. Mi.	Mil. Gals.	Mil. Gals.	Mil. Gals.	Gals.	Mil. Gals.
1 Spring Brook (including Covey Creek),	54.50	1,629	30	14.4	264,000	14.4
2 Little Mill Creek (Smithville,	3.1	----------	----------	0.3	97,000	0.3
3 Falling Springs Creek,	1.75	300	171	1.2	685,000	1.2
4 North Branch, Susquehanna, West Pittston pumping station,	(*)	----------	----------	----------	----------	----------
5 Mill Creek (Gardners Creek, Deep Hollow and Laurel Runs,	27.83	965	35	7.45	268,000	10.2
6 Solomon Creek, Crystal Lake, etc.,	12.59	1,660	132	2.8	(†)222,000	2.8
7 North Branch Susquehanna at Plymouth, Richards Island pumping station,	(*)	----------	----------	----------	----------	----------
8 Toby Creek,	14.84	1,755	118	7.2	485,000	10.0
9 Coal Creek,	4.07	12	----------	0.6	147,700	2.0
10 Harvey Creek,	47.	2,955	63	13.2	278,500	35.0
11 Sugar Notch, Nanticoke and Newport creeks,	2.80	47	17	0.6	214,000	0.6
Total,	168.48	9,323	55	47.75	----------	76.5

(*)No storage. Infiltration from river
(†)Natural Lake. (Only partly drawn on)
(‡)Exclusive of Susquehanna River, two intakes and pumping stations

DISTRIBUTION; GENERAL

Supply mains from these various sources are so connected up to one another and to the distributing mains that the waters are mingled and, therefore, as a rule, no one district is distinctly attached to any single watershed, although naturally receiving water principally from the nearest or most direct source. Two trunk main feeders, 24-inch and 30-inch diameter, from the Spring Brook watershed, near the northerly end of the system, extend westerly through Moosic, then southerly to Pittston, crossing the North Branch of the Susquehanna, at this point, to the westerly side of the river, and extending southerly nearly to Kingston, being fed at various points along the route by waters from other sources. At Forty Fort, a little north of Kingston, these parallel feed mains end and smaller ones, supplied principally from Harvey and Toby Creeks, branch off to the south to West Nanticoke and to the west to Wilkes-Barre and again southerly to Nanticoke. Territory on the easterly side of river between

Pittston and Wilkes-Barre supplied by mains from intervening watersheds from that side.

There are, in addition to the storage and distributing reservoirs on the various watersheds, several small equalizing reservoirs at various points within the districts supplied as follows:

Name	Elevation	Capacity Mil. Gals.	Purpose	Location
Avoca reservoir,	874.83	1.000	Equalizer (out of use),	Northeast of Avoca
Pittston reservoir,	762.48	1.250	Equalizer,	East of Pittston
Pa. Coal Co. reservoir	809.54	1.400	Equalizer,	East of Pittston
Plymouth, distributing reservoir	966.00	----------	Distributing from conduit from Pike's Creek head works	Between Plymouth and West Nanticoke
Lowertown reservoir (Dist.)	985.70	0.100	Detached from main system. Distributes water from artesian well to part of Larksville	Northwest of Larksville
Glen Lyon reservoir	615.00	19.3	Straight equalizing,	Between Nanticoke and Glen Lyon
Empire reservoir,	748.00	3.000	Equalizer. See table "Solomon's Creek"	Southeast of Wilkes-Barre
Georgetown storage tank	----------	----------	Storage and equalizer for Georgetown special service	Georgetown

SPRING BROOK

Spring Brook, to the present time, has furnished a larger supply than any other of the various sources, but with the recent development of Pike's Creek, a branch of Harvey's Creek, the latter will furnish the greater amount. The watershed, 52 square miles in area, is southwest of Scranton and east of Pittston. It extends 8 to 9 miles down the mountain from ridges forming divides between Stafford, Meadow Brook and Roaring Brook, of the Scranton Gas and Water Co.'s system to the north, and the Lehigh river to the east. The intakes, marking its lower limits, are about 3 miles up the hillside from the river. A small portion of this watershed feeds the high service district northerly from Moosic, through Minooka to Hyde Park and Bellevue in Scranton. Most of the water, however, flows through 24-inch and 30-inch trunk mains, previously mentioned, which feed low service down the valley. The company owns and controls about one-third of the entire watershed area.

Details shown in following table:

(a) Supplying low districts

Name	Location	Elevation	Drainage area square miles		Capacity	Storage per Sq. Mi.	Type of dam	Remarks
			Each	Total	(Mil. Gals.)	(Mil. Gals.)		
Maple Lake,	On branch of Rattlesnake Creek	1,650	1.07	----------	300	----------	Small earth dam 20 feet	Natural lake fed by springs. Water level raised by dam
Nesbitt reservoir,	Spring Brook below Rattlesnake Creek.	1,155.13	36.00	----------	1,279	35	Masonry 303 feet long and earth embankment with core wall 246 feet long. Masonry spillway 87 feet above creek bed	
Trout and Monument Brook (diverting reservoir)	On trout Brook 0.25 mile above junction with Spring Brook	917	7.52	----------	.01	----------	Small crib dam,	Discharges through 20-inch pipe into 24-inch main from Spring Brook intake
Spring Brook Intake. (Dist.)	Spring Brook,	910.36	8.41	53.	25.514	----------	Masonry 25 feet high. Constructed 1893	24-inch and 30-inch delivery mains through Moosic and south down valley

(b) Covey Creek (tributary) supplying high district

Stark (storage),	On Covey Creek 2 miles above Spring creek	1,143	0.47	----------	10	23	Sheet pile core embankment dam 18 feet maximum height	
Covey (storage) (distributing)	Directly below Stark reservoir	1,068.25	1.03	1.50	14.	16	Low earth dam, 18 feet. Formerly natural pond	10-inch delivery main branching into 10-inch and 8-inch north to Minooka and south Scranton

(b) Is supplemented at times during summer and fall by pumping, (1) from an intake on Spring Brook at Stalbert's Crossing about 1.5 miles below Spring Brook intake (direct watershed 2.5 square miles), and an 8-inch driven well, and (2) from the 24-inch delivery main from Spring Brook intake. The station is known as Taylor pumping station. The equipment consists of a 1,000,000 gallon Worthington compound and a 1,500,000 gallon centrifugal pump and a 150 hp. boiler. Water pumped against a 360 foot head through 5,000 feet of 10-inch main. Supplies principally low lands in Moosic and Old Forge boroughs, Pittston Township, including Dupont, Avoca and Duryea boroughs, Pittston City, part of Jenkins Township, and a partial supply to the various boroughs and communities along the northwest side of the river as far as Kingston.

(2) LITTLE MILL CREEK

Adjoining Spring Brook watershed along lower and easterly border is watershed 3.1 square miles on Lidy Creek, tributary of Little Mill Creek, which empties into the Lackawanna River just below Spring Brook, in Moosic Borough. The intake is about 2 miles east of Pittston and 0.5 mile above Dupont Village. This is auxiliary to Spring Brook, feeding certain low service territory from Avoca through Dupont to Pittston, and connecting at north and south with Spring Brook mains. Equalizing reservoir at Pittston is of 1,500,000 gallons capacity. In dry season this watershed yields practically nothing; supply then pumped from mains from Spring Brook and from wells.

Details shown in following table:

Name	Location	Elevation	Drainage area square miles		Capacity	Storage per Sq. Mi.	Type of dam	Remarks
			Each	Total	(Mil. Gals.)	(Mil. Gals.)		
Smithville intake (dist.),	Little Mill Creek (trib. to Lackawanna River)	884.47	3.1	3.1	.1	----------	Timber, 17 feet, -------	12-inch main branching south to Pittston and 8-inch north to Avoca. Connecting each end to Spring Brook mains
Avoca reservoir (equalizing)	In Avoca, ---------	875	----------	----------	1.0	----------	5-foot embankment	
Pittston reservoir (equalizing)	In Pittston, --------	762	----------	----------	1,250	----------	16-foot embankment	

(3) FALLING SPRINGS CREEK

Watershed in angle of fork formed by junction of Lackawanna River with the North Branch of Susquehanna, just above Pittston to the north. The creek occupies a narrow valley between mountains, opposite slopes of which drain westerly into North Branch and easterly into Lackawanna River. Supply from this source feeds high service territory on east side of Lackawanna River between Pittston and Scranton.

Details shown in following table:

Name	Location	Elevation	Drainage area square miles		Capacity	Storage per Sq. Mi.	Type of dam	Remarks
			Each	Total	(Mil. Gals.)	(Mil. Gals.)		
Falling Springs reservoir,	Falling Springs Creek about two miles below source	1,351	0.79	0.79	229.410	290	Two embankment dams with concrete core 55 feet	Discharges into creek below
Campbells Ledge reservoir	0.5 mile below upper reservoir on hill west of creek	1,061	0.86	1.65	69.665	176 (Comb.)	Two embankment dams with concrete core 27 feet	Fed from stream by canal, 1,400 feet long
Campbells Ledge intake,	On hillside just below Campbells Ledge reservoir	970	.10	1.75	0.900	----------	Concrete 17.5 feet, ----	A 20-inch delivery main branching north into a 16-inch and south into a 12-inch

Supply to high land in Taylor, Old Forge and Hughestown boroughs and Pittston Township

(4) SUSQUEHANNA RIVER NORTH BRANCH
(West Pittston, Pumping Station)

Pumping plant drawing water through 36-inch suction from a cross shaped crib sunk 7 feet into the river bed and covered with broken stone and gravel. Water delivered through 30-inch main into 30-inch trunk main from Spring Brook. This station operates only occasionally during the summer, when yield from other streams diminishes and consumption increases, or in severe winter seasons when consumption also runs high. Amount pumped varies from 4,000,000 to 6,000,000 gallons daily. Equipment a 7,500,000 gallon Jeanesville compound condensing and a 5,000,000 gallon Holly compound condensing pump and boilers of 750 hp. Water treated with hypochlorite.

(5) MILL CREEK

This stream, on easterly side of valley, has three principal branches, Gardner's Creek, Mill Creek proper and Laurel Run, whose watersheds adjoin and extend along upper slopes of mountain southward from Spring Brook. Connecting canals from Gardner's Creek to Mill Creek, and from Mill Creek to Laurel Run, distribute yield to intakes where most needed. Water from these sources feeds intermediate territory.

Details shown in following table:

(a) Gardner's Creek (supplies high districts)

Name	Location	Elevation	Drainage area square miles		Capacity	Storage per Sq. Mi.	Type of dam	Remarks
			Each	Total	(Mil. Gals.)	(Mil. Gals.)		
Gardner's Creek intake,--	Gardner's Creek about 3 miles below source	1,075	5.13	----------	73.975	15	Earth dam with masonry core. Maximum height 37 feet	Two 20-inch blow-offs, one discharging into stream bed below and one may flow into Laflin reservoir or be diverted through pipe line and canal to Mill Creek intake
Laflin intake, ----------	Below Gardner's Creek intake	916	2.88	8.01	.010	----------	Concrete 6.5 feet, ------	One 8-inch and one 12-inch main to serve Laflin Boro., Inkerman Plains, Plainsville and Midvale villeges and vicinity

(b) Mill Creek proper (supplies high districts)

Mill Creek storage reservoir No. 1	Mill Creek 2 miles below source	1,433	5.07	----------	616.700	122	Masonry dam 285 feet long, 63 feet high above stream bed flanked with earth embankments and core wall	Two 20-inch blow-off pipes discharge into stream channel
Mill Creek intake, -------	Mill Creek, 3 miles below reservoir	906	4.93	10	4.000	----------	Masonry dam 112 feet long, height above stream bed 31 feet	A 20-inch reducing to 16-inch to Miners Mills, Hudson and connecting with rest of system. Canal 11,800 feet long in rock and earth, side slopes 1½ to 1, sides riprapped, capacity of flow 57 m. g. d. Serves to divert portion of Mill Creek flow into Laurel Run No. 2 reservoir as required

(c) Laurel Run (supply to high districts)

Deep Hollow reservoir, --	Deep Hollow Run trib. of Mill Creek below Mill Creek intake	1,122	0.87	----------	229.661 (with flash-boards) 241.425	168	Concrete dam 790 feet long. Height 37 feet above creek bed	Discharges through creek bed into canal above mentioned flowing into Laurel Run reservoir No. 2
Laurel Run reservoir No. 2	Laurel Run just below gap in Wilkes-Barre Mtn.	858	8.50	----------	35	4	Masonry dam 291 feet long. Height 30 feet above stream bed	A 24-inch main through Parsons borough and to Wilkes-Barre high service. Also connects with other portions of high service systems

(d) Laurel Run (supply to low districts)

Laurel Run reservoir No. 1	Laurel Run just below reservoir No. 2	709	0.45	----------	5	11	Masonry dam 214 feet long. Height at spillway 18 feet	A 16-inch main through Parsons Borough and reducing in size entering Wilkes-Barre and connecting with branch main from Spring Brook system which crosses river at this point.

(a) High lands in Plains and Jenkins Townships and Laflin Borough
(b) High lands in Miners Mills and Parsons Boroughs and Plymouth and Plains Townships
(c) Parsons and Miners Mills and Wilkes-Barre City high districts
(d) Low or intermediate land in Miners Mills, Plains Township and Wilkes-Barre low districts

(6) SOLOMON CREEK (Pine Run and Crystal Lake)

Watershed southwest of that of Mill Creek and Laurel Run and south of Wilkes-Barre. Pine Run is tributary of Solomons Creek, which flows along the westerly boundary of Wilkes-Barre and discharges into North Branch of Susquehanna opposite southerly end of Plymouth. Crystal Lake is across the divide, and formerly drained into Wapwallopen Creek, but through closing its outlet thereto has been diverted into this watershed. An additional small area naturally draining into Nescopeck Creek is diverted into Crystal Lake by means of a canal. Water from these sources serve higher districts in Wilkes-Barre and vicinity, and delivery mains from it ultimately connect into same system as those from Mill Creek, so as to be available for emergencies in that district.

Details of reservoirs, drainage areas, etc., are shown in the following table:

Name	Location	Elevation	Drainage area square miles		Capacity	Storage per Sq. Mi.	Type of dam	Remarks
			Each	Total	(Mil. Gals.)	(Mil. Gals.)		
Crystal Lake,	Head of Wapwallopen Creek	1,937	2.92		1,650.00		Concrete 16 feet,	A 14-inch main reducing to 12-inch discharges into mechanical filters, 14 units, 7,000,000 gals. daily capacity and thence into Pine Run reservoir No. 1
Statler's Creek,	Small branch at head of Wapwallopen Creek	1,884	0.17		.01		Concrete and masonry, 5 feet	Discharges into Wapwallopen No. 4 intake
Wapwallopen No. 4 intake	Head of Wapwallopen Creek just below Crystal Lake	1,770	0.04	3.13	.01		Concrete and masonry 5 feet	A 12-inch main reducing to 10-inch extends to Fairview for supply of railroads and here connects with parallel main from Crystal Lake
Solomons Creek intake No. 5	On Solomons Creek above mouth of Pine Run	990	2.18		.01		Masonry 10 feet,	A 12-inch main delivers to Pine Run reservoir No. 1
Solomons Creek intake No. 3	On a small trib. of Pine Run	945	0.44		.01		8-foot masonry,	Discharges into Pine Run reservoir No. 1
Pine Run reservoir No. 1 (distributing)	On Pine Run short distance above mouth	922	4.00	6.62	7.50		Concrete and masonry 30 feet	Two delivery mains 16-inch and 14-inch feed through Ashley to Wilkes-Barre and vicinity. Reducing in size and finally connecting with Mill Creek street mains
Red Mill,	On Solomons Creek,	748	2.84		.02		Masonry 5 feet,	Said to be used only for industrial purposes at colliery in Ashley

Name	Location	Elevation	Drainage area square miles		Capacity	Storage per Sq. Mi.	Type of dam	Remarks
			Each	Total	(Mil. Gals.)	(Mil. Gals.)		
Empire reservoir, upper (equal)	Swale, south of Wilkes-Barre	748	----------	----------	3.00	----------	Embankment 9 feet, --	Equalizing reservoir for high service districts and supply to pumps for extra high service to Laurel Run Borough and Georgetown

Note: Supply to high land in Wilkes-Barre, Hanover Township and Ashley Borough. Also supplies booster pumping station for supply of Georgetown in Laurel Run Borough and Wilkes-Barre

(7) SUSQUEHANNA, NORTH BRANCH, AT PLYMOUTH (Richards Island Pumping Station)

Normally used as auxiliary supply for low service of Wilkes-Barre, and for district in northeasterly end of Hanover Township, south of Wilkes-Barre, from the river to Ashley, occupied principally by collieries and shops; district also supplied from Pine Creek and Crystal Lake sources. Station operated only occasionally in emergencies. There are 12-inch and 14-inch connections into low service mains of Plymouth and Wilkes-Barre, respectively, but these are normally shut off.

Pumping plant is at lower end of Richards Island. Until recently water obtained from large well 80 by 150 feet at top and 29 feet deep, with bottom below level of river bed. This well abandoned for 15 wells in same locality, 35 feet deep and yielding about 4,000,000 gallons per day. Installation consists of a Jeanesville 5,000,000 gallon triplex expansion, one Scranton 4,000,000 gallon pump and two Vulcan water tube boilers of 125 rated hp. each, housed in two brick buildings. Island is low in elevation and sometimes submerged.

(8) TOBY CREEK OR HUNTSVILLE BROOK

Watershed on west side of river comprises entire 14.84 square miles drainage area of Huntsville Brook above its mouth in Toby Creek, just below Trucksville and about 4 miles from the river. Supply from this source feeds low service principally in that district from Maltby on north to Plymouth on south, including Dorranceton, where it connects with 12-inch main from Spring Brook sources. Connection with 24-inch main crossing river at Wilkes-Barre, for emergency purposes. At times high service district in Plymouth receives water from this source through pumping at station in Downing Street, Plymouth, from low service main. Water from this source is filtered. Watershed of Toby Creek proper, lying to the east of Huntville Brook, unutilized for water supply, except in small amount for borough of Dallas, because in the lower reaches especially there is contamination from sewage and farms. See following table for further details:

Name	Location	Elevation	Drainage area square miles		Capacity	Storage per Sq. Mi.	Type of dam	Remarks
			Each	Total	(Mil. Gals.)	(Mil. Gals.)		
Toby Creek (storage reservoir)	On Huntsville Brook 2.5 miles above mouth in Toby Creek	1,132	8.44	8.44	1,750	208	Masonry 25 feet, ------	Formerly a natural lake, enlarged through construction of dam. Discharge through blow-offs into stream bed below
Filters, clear water basin,	Just below intake, --	824	----------	14.35	2.000	----------	Hollow type, reinforced 17 feet	Twenty units, Jewell gravity type 14-feet diameter and 16 feet high. Total rated capacity 16 m. g. d.
Huntsville intake No. 1,--	On Huntsville Creek near mouth	810	6.40	14.84	2.320	----------	Masonry 16 feet, ------	

(9) COAL CREEK

Small watershed of 4.07 square miles directly west of Plymouth, with intake in northerly borders of borough. An artesian well on mountainside in vicinity feeds into Lowertown reservoir and supplies small detached population in Larksville; another owned by Shawnee Spring Water Co., which bottles and sells the water. Supplies high districts Further details are shown in following table:

Name	Location	Elevation	Drainage area square miles		Capacity	Storage per Sq. Mi.	Type of dam	Remarks
			Each	Total	(Mil. Gals.)	(Mil. Gals.)		
Coal Creek reservoir No. 4	On Coal Creek about 1 mile above source	1,280	1.46	1.46	6	----------	Embankment and masonry 11 feet	Discharges through creek bed into reservoir below
Coal Creek reservoir No. 3	0.5 mile below No. 4,	1,100	.95	2.50	3	----------	Embankment and masonry 25 feet	Discharges through creek bed into reservoir below
Coal Creek reservoir No. 2	Just below No. 3, --	951	.97	3.47	1.5	----------	Masonry 18 feet, ------	Two artesian wells discharge into creek between reservoirs Nos. 1 and 2
Coal Creek intake No. 1,	0.5 mile below No. 2,	811	.60	4.07	1.0	----------	Masonry 12 feet, ------	A 12-inch main reducing to 6-inch into Plymouth and connecting with other high service mains in Larksville, also with Huntsville system, but gates normally closed on latter
Lowertown reservoir, ----	On hill northwest of Larksville	986	----------	----------	----------	----------	4-foot embankment, ---	Supplies about 240 families in Lowertown or "East End" of Larksville

(10) HARVEY CREEK

Watershed 47 square miles in area, closely approaches that of Spring Brook, which has 52 square miles. Storage reservoir of 2,941,000,000 gallons capacity on Pike Creek, westerly branch of Harvey Creek, greatly increases yield and transforms it from partial pumping to gravity supply.

Supply goes (1) via conduit of 50,000,000 gallons daily capacity, consisting of canal, tunnels, steel siphons, etc., easterly to Plymouth, Kingston, Dorranceton and vicinity, replacing Spring Brook supply in part, and across river to southerly part of Wilkes-Barre and adjacent territory for high districts; (2) southerly from No. 2 intake through 20-inch, reducing at West Nanticoke to 18-inch, across river to high districts of Nanticoke, Glen Lyon and surrounding territory; also easterly through 14-inch and 12-inch mains to Plymouth; and (3) from No. 1 intake southerly to West Nanticoke and across river to Nanticoke for lower districts. Further details are shown in the following table:

Name	Location	Elevation	Drainage area square miles		Capacity	Storage per Sq. Mi.	Type of dam	Remarks
			Immed. trib.	Total Above	(Mil. Gals.)	(Mil. Gals.)		
Pike Creek reservoir (storage)	On Pike Creek 0.75 mile northwest from junction with Harvey Creek	1,052.5	11.70	11.70	2,941.00	253	Embankment 56 feet. Concrete core	Discharges into canal headworks below dam and through creek bed into intake No. 2
Pike Creek Canal headworks	Just below dam, ----	979.37	11.70	----------	----------	----------	----------	(a) Open canal and conduit and pipe line to Plymouth high districts and across river to Wilkes-Barre and feeding southerly and westerly, supplementing Hanover and Wanamie, etc., supplies
Harvey Creek intake No. 2	Harvey Creek just below junction of Pike Creek	941.88	22.5	34.2	15.00	----------	Concrete 11.5 feet, -----	(b) 20-inch main to W. Nanticoke, branching 12-inch and 14-inch to Plymouth and 18-inch across river to Nanticoke and on to Glen Lyon, 14-inch, 12-inch and 8-inch Glen Lyon equalizing reservoir
Harvey Creek intake No. 1	On Harvey Creek about 1 mile above mouth in Susquehanna North Branch	644.0	12.8	47	0.10	----------	Small masonry, --------	14-inch main feeds across river to Nanticoke low districts

(a) Conduit consists of open canal, 36-inch steel syphon under creek, open channel and 7-foot by 9-foot tunnel into Plymouth distributing reservoir, elevation 966. and thence through 48-inch concrete conduit and 36-inch cast iron main to connect with distributing system in Plymouth and to feed 24-inch main across river to Wilkes-Barre.

(b) A pumping station in Nanticoke served until recently as a booster to both the high districts in Nanticoke, Glen Lyon and vicinity. It is now out of service though maintained for emergencies

(11) SUGAR NOTCH, NANTICOKE AND NEWPORT CREEKS

These are small and separate watersheds, areas 1.74, 0.54 and 0.91 square miles respectively, on easterly side of river and furnishing supplies to small boroughs and villages southwest of Wilkes-Barre and south of Nanticoke. Sugar Notch Run and Nanticoke Creek supply opposite ends of pipe line feeding Sugar Notch and Warrior Run boroughs and Hanover Village. Sugar Notch reservoir can be fed from Crystal Lake, if necessary, through pipe line laid around mountainside from that source, and has emergency connection with Harvey's Creek system.

The Newport Creek supplies Wanamie village and adjacent territory; system connected with Nanticoke and Crystal Lake systems. Further details shown in the following table:

Name	Location	Elevation	Drainage area square miles		Capacity	Storage per Sq. Mi.	Type of dam	Remarks
			Each	Total	(Mil. Gals.)	(Mil. Gals.)		
Sugar Notch Watershed								
Sugar Notch intake,	Sugar Notch Run 1 mile west of Sugar Notch Boro. line	930	1.35	----------	.02	----------	Concrete and masonry 8 feet	Water diverted through a pipe line into storage reservoir
Sugar Notch (storage) (distributing)	On Warrior Run near Boro. line	915	----------	1.35	9.312	----------	Masonry 8 feet,	Flow from an artesian well also delivered into this reservoir. A 12-inch main delivers to Sugar Notch and Warrior Run Boros. and Hanover Village
Nanticoke Creek Watershed								
Hanover storage reservoir	Trib. of Nanticoke Creek 1 mile south of Hanover	1,058	----------	0.46	4	----------	Masonry and embankment 11 feet	Discharges through stream channel into intake below
Hanover intake,	About 1,000 feet below on same stream	887	0.08	0.54	.05	----------	Concrete 22 feet,	A 6-inch pipe line delivers to Hanover Village connecting with pipes from Sugar Notch source
Newport Creek								
Wanamie storage,	On Newport Creek 0.75 mile west of Wanamie	899	0.77	----------	34	----------	Embankment 25.5 feet,	Discharges through stream channel into intake below
Wanamie intake,	Just below on same stream	810	0.14	0.91	.05	----------	Concrete and dry masonry 12 feet	An 8-inch main reducing to 6-inch, 4-inch and 3-inch delivers to Wanamie Village and neighboring collieries

MAINS IN WHOLE SYSTEM (Jan. 1, 1914):

Size (inches)	Length (miles)	Per cent. of total
Smaller than 3	15.6	3
3	51.3	9
4	233.5	42
6	82.0	15
8	40.0	7
10	35.9	6
12	31.8	6
14	17.9	3
16	10.0	2
18	13.9	2
20	16.5	3
24	13.7	2
30	0.2	--
36	1.0	--
Total,	563.3	100

Of total amount of mains, 17.8% is in Wilkes-Barre, 4.9% in Pittston and 3.3% in Plymouth.

RANGE OF PRESSURES AS FOLLOWS:

Taylor and Old Forge	30-100	East Plymouth,	10- 50
Moosic,	50-100	Inkerman,	20- 40
Avoca,	20- 60	Laflin,	60- 80
Dupont, Duryea,	10- 60	Plains,	20- 80
Port Griffith,	70	Hudson,	60- 75
Pittston,	80-100	Miners Mills,	40-105
West Pittston and Exeter,	60	Parsons,	20- 45
Wyoming, Swoyersville,	60	Wilkes-Barre,	40- 70
West Wyoming, Dorranceton and Luzerne,	60- 90	Ashley,	60
Kingston,	50- 85	Sugar Notch,	20- 80
Edwardsville and Forty Fort,	60	Warrior Run and Hanover,	30-110
Courtdale,	40	Wanamie,	30- 85
Larksville,	20- 40	Newport Township,	10- 80
Plymouth,	20- 80	Nanticoke,	40-100

Public fire hydrants: Pittston, 62; Plymouth, 66; Wilkes-Barre, 340; whole system, 1,305. Practically all have 4-inch connections, but about one-third have 4½-inch valve opening. About 20% 2½-inch nozzles, and about 40% steamer nozzles.

CONSUMPTION

Supply mains not metered, but pitometer measurements used as basis for getting total consumption. Following table furnished by company shows details of estimates and comparison with consumption in 1906. From this it appears that the total consumption in 1914 was 56.5 million gallons, as compared with 39.8 million gallons in 1906, increase of 2.1 million gallons per year, or average of 5.25%,

annually over the period given. Consumption per capita decreased from 190 to 178 gallons per day. Company will install Venturi meters on supply mains. Domestic service not metered. Total number of service meters 1,615, for industrial and commercial consumers.

District (only principal places named)	Population		Consumption		
			Per capita	Total	
	1906	1914		1906	1914
Taylor and Old Forge,	17,450	32,580*	77.2	1,349,000	2,520,000
Moosic,	1,400	5,053	----------	----------	505,300
Avoca,	3,600	5,098	90.0	323,000	458,000
Dupont, Duryea, Port Griffith and Pittston,	25,550	29,464	125.0	3,187,000	3,685,000
West Pittston and Exeter,	9,650	11,200	165.3	1,598,600	1,850,000
Wyoming, Swoyersville, West Wyoming, Dorranceton, Luzerne, Kingston, Edwardsville and Forty Fort,	25,600	38,560	198.3	5,075,000	7,630,000
Courtdale and Larksville,	4,100	13,000	53.0	217,000	690,000
Plymouth and E. Plymouth,	24,500	24,880	105.6	2,535,000	2,630,000
Inkerman, Laflin, Plains, Hudson, Miners Mills and Parsons,	14,000	24,160	253.0	3,540,000	6,110,000
Wilkes-Barre and Ashley,	77,300	86,770	273.0	21,088,000	23,600,000
Sugar Notch, Warrior Run and Hanover,	3,700	11,910	135.2	500,000	1,615,000
Wanamie,	2,466	3,010	147.2	363,000	443,000
Newport Township,	----------	8,390	----------	----------	1,258,000
Nanticoke,	----------	23,077	----------	----------	3,452,000
Total, 1906,	209,316	----------	190.0	39,775,600	----------
Total, 1914,	----------	317,147	178.0	----------	56,456,300

*Includes 2,000 in Scranton.

WILKES-BARRE

TOPOGRAPHY

City extends nearly 4 miles along river and a mile or more back, or south of it. Business section and considerable part of residential section occupy flat land adjacent to river at approximately elevation 530, but outlying sections are hilly, reaching elevation 700 in places.

SERVICES

Two services. About two-thirds of city, including congested and minor mercantile districts, is on the low service, elevations ranging from 530 to 630. Elevations in high service district 530 to 695.

SUPPLY—MAIN FEEDERS

Supply mains enter the city as follows: At westerly end from Pike Creek at north and from Crystal Lake (Pine Run reservoir No. 1) from south. From south, entering about center, is main from Empire storage reservoir. From east, at southerly corner, feeders from Laurel Run No. 1 and No. 2 and Mill Creek enter, while at

northerly corner a main enters from across river from Spring Brook mains, fed partly from Toby Creek (Huntsville reservoir). Richards Island station can feed into 24-inch main entering from across river from Pike Creek.

Supply from Pike will change feed considerably. Mains from this source, from Crystal Lake (Pine Run reservoir No. 1), Laurel Run No. 2 and Mill Creek will supply high territory. Main from Pike Creek can be fed from Richards Island pumping station in emergency. Others mentioned feed low service. Connections between supply mains make it possible, by throttling gates, to feed low service from high service mains.

DISTRIBUTION

(See preceding table for details as to distributing mains and hydrants.) Range of pressures is shown in the following table:

District	Pressure, pounds per square inch, with hydrant outlet closed		
	Average	Maximum	Minimum
Low service,	29.6	47	11
High service,	45.3	98	7
Congested value district,	33	37	30
Entire city,	36	98	7

SECTION No. 6

SUSQUEHANNA RIVER

UPPER WEST BRANCH SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

Table of Industrial Water Supplies (Coal Companies)

SECTION No. 6

SUSQUEHANNA RIVER—UPPER WEST BRANCH SUB-BASIN

GENERAL DESCRIPTION

LOCATION AND EXTENT

The Upper West Branch Sub-basin of the Susquehanna River lies in the western central part of Pennsylvania, the western boundary forming practically the whole eastern boundary of the Allegheny River sub-basins. It comprises an area of about 2,615 square miles and covers the territory in Pennsylvania drained by the West Branch above the mouth of Sinnemahoning Creek, in the northwestern part of Clinton County. Included in this area are the greater part of Cameron and Clearfield counties, about one-third of Elk and Cambria counties, together with small portions of Jefferson, Potter, McKean, Clinton, Centre and Indiana counties.

SURFACE CHARACTERISTICS

This territory lies west and north of the Allegheny Mountains, with its southern part bordering the main ridge. The general character of the surface is high rough plateaus with irregular ranges of hills and knobs. The northern portion is drained by Sinnemahoning Creek, which joins the West Branch as it leaves the Sub-basin; the other important tributaries are Moshannon, Clearfield, Anderson and Chest creeks.

POPULATION

The population in the southern half of this section is large and growing, due to the bituminous coal industry. The density of population increases from 21 per square mile in the northern portion, in Cameron County, to 156 per square mile in the southern portion, in Cambria County, the average being 57. Of the total population of over 150,000 in 1910, the urban population was 22%. The largest settlements lie along Moshannon Creek and at the headwaters of Clearfield and Chest creeks and the West Branch of the Susquehanna River.

RESOURCES AND INDUSTRIES

The bituminous coal measures found everywhere in this section are the most important of its resources, most of the mines lying in the southern portion. Forty or fifty years ago lumbering in the forests of this section was by far the principal industry, and still is to some extent in the northern portion. Mining is, therefore, taking the place of lumbering as the principal factor in the industrial growth of this section. Other resources are large deposits of fire clay, iron ore, salt and building stone, while important manufacturing industries are found in the larger boroughs. Very little agriculture is possible anywhere in this section, but the State has large forest reservations in Clearfield County.

WATER SUPPLY

The chief industrial water consumption is that of the railroads, following closely that of all public systems; next is the tanning and miscellaneous industries, and last the coal and coke companies. The greater part of the railroad supplies is under the gravity system, as are most of the public supplies. The coal companies and other industries generally pump their water. This is due to the demand for purer water from the hills for domestic and railroad use, whereas the industrial demand may be satisfied by pumping water of poorer quality from the larger streams. In several cases industries also pump from wells.

There are 31 public supply systems, of which seven are municipally owned, the largest being that of DuBois, with 806,000 gallons per day consumption. The aggregate population served by water supply systems is 64,000. The largest town supplied by a corporation is Clearfield, with a population of 8,000 and a consumption of 1,500,000 gallons, mostly industrial. The Houtzdale Water Co. supplies 5,000 people in Houtzdale, Brisbin, Ramey and neighboring centers, having a total population of 5,600. Winburne, Lanse, Kylertown and Munson, with 2,900 population served, are supplied by the Winburne Water Co The total public supply is estimated at 6,800,000 gallons per day, about equal portions being used domestically and industrially.

The railroads consume nearly 6,000,000 gallons per day, of which 14% is obtained from public supplies. The principal users are the Pennsylvania R. R. and the New York Central lines, the former having the greater consumption. Next in importance are the coal companies with a total reported consumption of about 1,800,000 gallons, 11% domestic. The Elk Tanning Co. is reported as using about 1,600,000 gallons, while the Bayless Mfg. Corp., at Austin, pulp manufacturers, have a reported consumption of 2,000,000 gallons.

These figures are low in comparison with those of the large industrial centers, and indicate that the demand for water is not very great, the consumption per square mile of 7,000 gallons per day being one of the lowest in the State.

The following tables give a summary of the water supplies in this section, both domestic and industrial, after which are detailed descriptions of the water supply systems arranged alphabetically according to places supplied:

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 6

Place	County	Ownership or control	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Ansonville,	Clearfield, Jordan Twp.,	Ansonville W. Co.,	400	100						1	
Arcadia,	Indiana, Montgomery Twp.,	Arcadia W. Co.,	1,300	1,200						1	
Austin,	Potter,	Municipal,	1,500	1,350				1			
Bakerton,	Cambria, Carroll Twp.,	Bakerton W. Co.,	1,000	1,000						1	
Barnesboro,	Cambria,	Municipal,	4,000	1,000				1			
Blandburg,	Cambria, Reade Twp.,	Blandburg W. Co. (Pennsylvania R. R. Co.)	800b	100						1	
Carrolltown,	Cambria,	Municipal,	1,500	1,500				1			
Cherrytree,	Indiana,	Cherrytree W. Co.,	500	350			1				
Clearfield,	Clearfield,	Clearfield W. Co.,	8,500	8,000			1				
Lawrence Twp. (part)	Clearfield,										
Coalport,	Clearfield,	Municipal,	850	500				1			
Curwensville,	Clearfield,	Curwensville W. Co.,	3,000	2,000			1				
Driftwood,	Cameron,	Driftwood W. Co.,	525	520			1				
DuBois,	Clearfield,	Municipal,	14,350	11,000		1					
Elk County Home,	Elk, Benzinger Twp.,	Private, State institution,	(125)	(125)							
Emporium,	Cameron,	Emporium W. Co.,	3,000	2,700			1				
Gallitzin,	Cambria,	Gallitzin W. Co. (Cambria Co. W. S. Co.) (Pa. Coal & Coke Corp.	3,900b	3,000			1				
		Municipal,		750b				1			
Glen Campbell,	Indiana,	Glen W. Co.,	1,200	900			1				
Hastings,	Cambria,	Municipal,	2,900	1,900				1			
		Hastings W. Co.,		500			1				
Houtzdale,	Clearfield,	Houtzdale W. Co.,	5,650	5,034			1				
Brisbin,	Clearfield,						—				
Gulich Twp. (part),	Clearfield,									—	
Ramey,	Clearfield,						—				
Smoke Run Dist.,	Clearfield, Bigler Twp.,									—	
Woodward Twp. (part),	Clearfield,									—	
Madera,	Clearfield, Bigler Twp.,	Madera W. Co.,	1,500	750						1	
Mahaffey,	Clearfield,	Private, 3 systems,	760	70b					3		
Osceola,	Clearfield,	Osceola W. S. Co.,	2,450	2,600			1				
Montola,	Centre, Rush Twp.,		1,000							—	

Patton,	Cambria,	Patton W. Co.,	4,500	4,200			1			
Penfield,	Clearfield, Huston Twp.,	Penfield W. Co., Partnership,	600	320						1
Philipsburg,	Centre,	Citizens W. Co.,	6,885	6,200			1			
Chester Hill,	Clearfield,						—			
Decatur Twp. (part),	Clearfield,								—	
Morris Twp. (part),	Clearfield,								—	
Rush Twp. (part),	Centre,								—	
South Philipsburg,	Centre,						—			
St. Benedict,	Cambria, Carroll Twp.,	St. Benedict W. Co.,	1,250	1,000					1	
Spangler,	Cambria,	Northern Cambria W. Co.,	3,000	2,200			1			
Winburne,	Clearfield, Cooper Twp.,	Winburne W. Co.,	3,330	2,875					1	
Kylertown,	Clearfield, Cooper Twp.,								—	
Lanse,	Clearfield, Cooper Twp.,								—	
Munson,	Clearfield, Morris Twp.,								—	

bEstimated by Water Supply Commission

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 6—Continued

Place	County	Ownership or control	Source			System			Consumption (average daily)			
			Surface	Ground	Combined	Gravity	Pumped	Combined	Domestic (gals.)	Industrial (gals.)	Total (gals.)	Per capita (gals.)
Ansonville,	Clearfield, Jordan Twp.,	Ansonville W. Co.,	---	1	---	1	---	---	---	---	3,000b	-----
Arcadia,	Indiana, Montgomery Twp.,	Arcadia W. Co.,	---	---	1	---	---	1	---	---	36,000b	-----
Austin,	Potter,	Municipal,	---	1	---	---	1	---	---	---	81,000b	-----
Bakerton,	Cambria, Carroll Twp.,	Bakerton W. Co.,	---	1	---	---	---	1	72,000	144,000	216,000	216t
Barnesboro,	Cambria,	Municipal,	---	1	---	---	1	---	---	---	*50,000a	-----
Blandburg,	Cambria, Reade Twp.,	Blandburg W. Co. (Pennsylvania R. R. Co.)	1	---	---	1	---	---	14,000a	36,000a	50,000a	-----
Carrolltown,	Cambria,	Municipal,	---	1	---	---	1	---	40,000	---	40,000	27d
Cherrytree,	Indiana,	Cherrytree W. Co.,	1	---	---	---	---	1	50,000a	50,000a	100,000a	-----
Clearfield,	Clearfield,	Clearfield W. Co.,	1	---	---	1	---	---	680,000a	820,000a	1,500,000a	-----
Lawrence Twp. (part),	Clearfield,											
Coalport,	Clearfield,	Municipal,	---	1	---	---	---	1	---	---	25,000a	-----
Curwensville,	Clearfield,	Curwensville W. Co.,	1	---	---	---	---	1	188,000	62,000	250,000	125t
Driftwood,	Cameron,	Driftwood W. Co.,	1	---	---	1	---	---	35,000a	115,000a	150,000a	-----
DuBois,	Clearfield,	Municipal,	1	---	---	1	---	---	556,000	250,000	806,000	73t
Elk County Home,	Elk, Benzinger Twp.,	Private, State institution,	---	---	---	---	---	---	3,000a	---	3,000a	-----
Emporium,	Cameron,	Emporium W. Co.,	1	---	---	---	---	1	151,000a	101,000a	252,000a	-----
Gallitzin,	Cambria,	Gallitzin W. Co. (Cambria Co. W. S. Co.) (Pa. Coal & Coke Corp.	1	---	---	---	1	---	---	---	150,000b	-----
		Municipal,	1	---	---	1	---	---	---	---	37,000	-----
Glen Campbell,	Indiana,	Glen W. Co.,	1	---	---	---	1	---	45,000	5,000	50,000	56t
Hastings,	Cambria,	Municipal,	---	1	---	---	---	1	60,000a	---	60,000a	-----
		Hastings W. Co.,	1	---	---	1	---	---	9,900a	3,300a	13,200a	-----
Houtzdale,	Clearfield,											
Brisbin,	Clearfield,											
Gulich Twp. (part),	Clearfield,	Houtzdale W. Co.,	1	---	---	---	1	---	200,000a	125,000a	325,000a	-----
Ramey,	Clearfield,											
Smoke Run Dist.,	Clearfield, Bigler Twp.,											
Woodward Twp. (part),	Clearfield,											
Madera,	Clearfield, Bigler Twp.,	Madera W. Co.,	---	1	---	1	---	---	---	---	30,000b	-----
Mahaffey,	Clearfield,	Private, 3 systems,	---	3	---	3	---	---	2,100b	---	2,100b	-----

Osceola,	Clearfield,	Osceola W. S. Co.,	1	---	---	1	---	---	150,000a	350,000a	500,000a	------
Montola,	Centre, Rush Twp.,											
Patton,	Cambria,	Patton W. Co.,	1	---	---	---	1	---	210,000	490,000	700,000	167t
Penfield,	Clearfield, Huston Twp.,	Penfield W. Co., Partnership,	1	---	---	1	---	---	19,200a	20,000a	39,200a	------
Philipsburg,	Centre,	Citizens W. Co.,	1	---	---	1	---	---	600,000a	400,000a	1,000,000a	------
Chester Hill,	Clearfield,											
Decatur Twp. (part),	Clearfield,											
Morris Twp. (part),	Clearfield,											
Rush Twp. (part),	Centre,											
South Philipsburg,	Centre,											
St. Benedict,	Cambria, Carroll Twp.,	St. Benedict W. Co.,	1	---	---	---	---	1	18,000a	12,000a	30,000a	------
Spangler,	Cambria,	Northern Cambria W. Co.,	1	---	---	1	---	---	88,000b	74,000a	162,000b	------
Winburne,	Clearfield, Cooper Twp.,	Winburne W. Co.,	1	---	---	1	---	---	86,200b	85,600a	171,800b	------
Kylertown,	Clearfield, Cooper Twp.,											
Lanse,	Clearfield, Cooper Twp.,											
Munson,	Clearfield, Morris Twp.,											

aEstimated by water companies.
dDomestic.
tTotal
*Purchased from Madera Coal Mining Co.

RAILROAD WATER SUPPLIES, SECTION NO. 6

BUFFALO, ROCHESTER & PITTSBURGH

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Glendale (locos.),	Springs,	Gravity,	75,000	
Bickford (locos.),	Curwensville W. Co.,			50,000

BUFFALO & SUSQUEHANNA

Caledonia,	Small creek,	3-inch grav. line,	16,000	
Hicks Run,	Small creek,	3-inch grav. line,	16,000	
Hull (water sta.),	Small creek,	2-3-inch grav. line,	256,000	
	Spring,	1-4-inch grav. line,		
Lick Lsland (water sta.)	Small creek Creek,	4-inch gravity,	28,000	
Penfield (water sta.),	Penfield Boro.,	2½-1-inch pipe,		25,000
Penfield Depot,	Penfield Boro.,			
Wharton (water sta.),	Springs,	1-4-inch grav. line,	40,000	
		1-2-inch grav. line,		

PITTSBURGH, SHAWMUT & NORTHERN

North Fork,	Stream,	Pumped,	100,000	
St. Marys,	Water Co.,	Purchased,		90,000
Weedville,	Kersey Creek,	Gravity,	50,000	

NEW YORK CENTRAL & HUDSON RIVER

Philipsburg,	Philipsburg W. Co.,	3 ft. conc. dam 25 ft. long		20,000
Hicklin,	Hicklin Run,	3-inch grav. line,	50,000	
Arcadia,	Arcadia W. Co.,	4-inch city main,		12,000
Bower,	Passmore Run,	4-inch grav. water strainer	65.000	
Cataract,	Three runs,	3 ft. conc. dam 40 ft. long		
		6-inch gravity,	120,000	
Cherry Tree,	Cherry Tree W. Co.,	4-inch city main,		100,000
Black Bear,	Black Bear Run,	6-inch strainer & grav. line	58,000	
Clearfield,	Clearfield W. Co.,	4-inch main,		225,000
Clearfield Jct.,	Clearfield Creek,	6-inch suction w. strainer	12,000	
Dimeling,	Clearfield Creek,	6-inch suction w. strainer	7,300	
"CW" Tower,	Susq. River,	6-inch suction w. strainer	60,000	
Dowler Jct.,	Well 8 inch x 22 feet and Susq. River.	6-inch suction strainer in well & river	60,000	
Lumber,	Susq. River,	6-inch suction and strainer	75,000	
Mowry,	Basin Run,	6-ft. conc. dam 40 ft. long		
		6-inch gravity	130,000	
Hooverhurst,	Spring,	3-inch C. I. pipe with strainer	5,000	
Mahaffey,	Millers Run,	3 ft. conc. dam 60 ft. long	80,000	
	Susq. River,	6-inch grav. line,		
Laurin,	Daugherty's Run,	6-inch grav. water strainer	7,300	
Kermoor,	Friendship Run,	3-ft. conc. dam 60 ft. long	40,000	
		6-inch grav. line,		
Potts Run,	Clearfield Creek,	6-inch suction w. strainer	20,000	

RAILROAD WATER SUPPLIES, SECTION NO. 6

NEW YORK CENTRAL & HUDSON RIVER—Concluded

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Rossiter Jct.,	Fredericks Run,	4-inch gravity w. strainer	49,000	
Viaduct,	Laurel Run,	6-inch grav. strainer in run		
	Brown's Run,	4 ft. by 40 ft. conc. dam 6-inch grav.	120,000	
Rock Run,	Rock Run,	3 ft. stone dam 40 ft. long		
		8-inch grav. line,	45,000	
Woodland,	Roaring Run,	3 ft. conc dam 40 ft long		
		3-inch grav. line,	20,000	
Walton,	Bald Hill Run,	4 ft. conc. dam 50 ft long		
		6-inch gravity,	80,000	
"SX" Tower,	Jews Run,	6-inch gravity w. strainer	165,000	
St. Benedict,	St. B. Water Co.,	1½-inch main,		6,000
Philipsburg,	City mains,			15,000
Osceola Brk. Works,	City mains,			10,000
Houtzdale,	City mains,			15,000
Ramey,	City mains,			7,500

PENNSYLVANIA

Belsena,	Clearfield Creek,	Pump,	8,000	
Bennezette,	Spring, Wins. Hol. Run,	Gravity,	20,000	
Blue Ball,	Spring,	Gravity,	121,000	
Charlie Run,	Run,	Gravity,	10,000	
Caledonia,	Oval Run,	Gravity,	aband.	
Driftwood,	8-inch driven well & spring,	Pumped,	255,000	
		Gravity,		
Emporium Jct.,	Sinnemahoning,	Pumped,		
	Portage Creek,	Pumped,	230,000	
Fintons,	Stream,	Gravity,	10,000	
Grove,	Stream,		100,000	
Huntley,	Stream,	Gravity,	40,000	
Howard,	Stream,	Pumped,	100,000	
Keating Summit,	Springs,	Pumped (not used),		
	Springs,	Gravity,	75,000	
Gallitzin,	Summit W. S. Co.,		830,000	
Clearfield,	Borough,			17,000
Osceola Mills,	Osceola W. S. Co.,			130,000
	Small run,	Pumped,	190,000	
Penfield,	Penfield Water Co.,	Gravity,		10,000
Curwensville,	Anderson Creek,	Pumped,	40,000	
Coal Run Ext.,	Spring,	Gravity,	3,000	
Penna. Furnace,	Spruce Creek,	Pumped,	7,000	
Ramey,	Small run,	Pumped,	20,000	
Mountain Branch,	Ramey W. Co.,			5,000
Rathbun,	Stream,	Gravity,	90,000	
Shippen,	Sinnemahoning,	Pumped,		
	Portage Creek,	Gravity,	100,000	
Sizerville,				
Sterling Run,	Stream,	Gravity,	40,000	
Sandy Ridge,	Stream,		10,000	
Smoke Run,	Ramey W. Co.,			50,000
Figart,	Blandburg W. Co.,		115,000	
Hoverly,	Spring,	Gravity,	25,000	
Comfort Run,	N. Witmer Run,	Pumped,		
	Raccoon Run,	Gravity,	114,000	
LaJose,	Wilson Run,	Pumped,		
	Barrett's Run,	Gravity,	80,000	
McGees,	Whiskey Run,	Gravity,	62,000	
Madeira Hill,	Rocky Springs W. Co.,			7,000
Cresson,	Summit W. S. Co.,			
	Wells,	Pumped,	263,500	
Dysart,	Big Laurel Run,	Gravity,	15,000	
Sandy Run,	Sandy Run,	Gravity,	3,000	

RAILROAD WATER SUPPLIES, SECTION NO. 6

PENNSYLVANIA—Concluded

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Irvona,	Leatherwood Run,	Gravity,	13,000	
Bradley Jct.,	Chest Creek,	Pumped,	96,000	
Spangler,	Spangler W. Co.,			44,000
Barnesboro,	Spangler Colliery No. 4,		99,500	
Peggs Run,	Run,	Gravity,	3,000	
Patton,	Chest Creek,	Pumped,	10,000	
	Patton W. Co.,	Gravity,		13,000
Hastings,	Helfrick Run,	Gravity,	2,000	
Rogue Harbor,	Rogue Harbor Run,	Gravity,	30,000	
Snyder Run,	Snyder Run,	Gravity,	5,000	
Cush Creek Jct.,	Run,	Gravity,	17,000	
Totals,			5,101,600	851,500

INDUSTRIAL WATER SUPPLIES, SECTION NO 6 (MISCELLANEOUS COMPANIES)

Does not Include all the Smaller Companies

Place	Company	Source	Method	Consumption, gallons per day		Daily amount of product	Ret'd to stream (%)	Increase in temp. °F.
				Domestic	Industrial			
Austin, Potter county,	Bayless Mfg. Corp.,	Freeman Run,	Gravity—60,000,000 gallon storage reservoir.		2,000,000	65 tons	95	
Cherrytree, Indiana county,	Iron works,	Killins Creek,						
Clearfield, Clearfield county,	Elk Tanning Co.,	Clearfield W. Co. Deep well.	Pumped,		300,000			
	Harbison-Walker Refractories Co.	Clearfield W. Co.,			(125,000)	350 tons	60	to 110
Costello, Potter county,	Elk Tanning Co. (Tannery operations suspended)	Nine springs and first fork Sinnemahoning Creek	Gravity from 13,000 and 900 gallon res. and from creek	18,000 (600 pop.)	(450,000)			
	Elk Tanning Co. Extract works	Sinnemahoning Creek,	Pumped,		600,000			
Curwensville, Clearfield county	Elk Tanning Co.,	Anderson Creek. Wells,	Pumped,		300,000			
	Harbison-Walker Refractories Co. (Widemire works)	Little Anderson Creek,	Gravity,		25,000	105 tons	60	to 110
Emporium, Cameron county,	Elk Tanning Co.,	Driftwood branch of Sinnemahoning Creek. Emporium W. Co.	Pumped,		150,000			
	Keystone National Powder Co.	Emporium W. Co.,			(15,000)			
Figart, Cambria county,	Harbison-Walker Refractories Co. (Cambria works)	Powell Run,	Gravity,		60,000	193 tons	60	to 110
Irvona, Clearfield county,	Elk Tanning Co.,	Drilled well,	Pumped					
Mahaffey, Clearfield county,	J. K. Mosser Co. Tannery,	N. Witmer Run, 2 drilled wells	Pumped,		300,000			
Philipsburg, Centre county,	Harbison-Walker Refractories Co.	Chest Creek, Well	Pumped,	3,000 (25 fam.)	9,500			
		Citizens W. Co.,			(50,000)	155 tons	60	to 110

INDUSTRIAL WATER SUPPLIES, SECTION NO 6 (MISCELLANEOUS COMPANIES)

Does not Include all the Smaller Companies

Place	Company	Source	Method	Consumption, gallons per day		Daily amount of product	Ret'd to stream (%)	Increase in temp. °F.
				Domestic	Industrial			
Retort, Centre county,	Harbison-Walker Refractories Co.	Drilled well,	Pumped					
		Springs,	Gravity,		50,000	175 tons	60	to 110
Spangler, Cambria county,	Northern Cambria Street Railway Co.	Rocky Run,						
Wallaceton, Clearfield county	Harbison-Walker Refractories Co.	Drilled well,	Pumped,		25,000	105 tons	60	to 110
		Springs,	Gravity					
Woodland, Clearfield county,	Harbison-Walker Refractories Co. (2 plants)	Roaring Run,	Pumped,		60,000	193 tons	60	to 110
Total from private systems,				21,000	3,879,500			

Place	Company	Source	Method	Consumption (gallons per day) Domestic	Consumption (gallons per day) Industrial	Daily amount of products, short tons	Number of collieries supplied
Cambria County							
Barnesboro,	Madeira Hill Coal Min. Co. to Pennsylvania R. R.	Mine,	Pumped,		s 50,000 (15,000)	390	1
Barnesboro (near),	Barnes & Tucker Coal Co.,	Porter Run, Mine,	2,200,000 gal. res., gravity, Pumped, emergency		s 23,000	1,572	8
Barnesboro (near),	Clearfield Bituminous Coal Corp.	One 8-inch drill hole, One 6-inch drill hole,	100,000 gallon res., pumped,		40,000	664	1
Barr township,	Duncan Spangler Coal Co.,	Mountain springs,	180,000 gallon reservoir, gravity	2,000 (120 pop.)	s 10,000	189	1
Delaney,	Altoona Coal & Coke Co.,	Spring,	1,440,000 gal. res., pumped,		16,000	740	1
E. Carroll Twp.,	Carrolltown Coal Co., No. 6,	Branch of Rocky Run, Mine,	Pumped, Pumped		s 15,000	144	1
Emeigh Run, Susquehanna Twp.	Cherrytree Coal Co., No. 15,	Tributary of Emeigh Run, Mine,	100,000 gallon reservoir, pumped Pumped		s 60,000	530	1
Gallitzin,	Taylor & McCoy C. & C. Co.,	Two tributaries of Clearfield Creek.	Two 1,000,000 gal. reservoirs, pumped		c 80,000 s 50,000	375 coke 735 coal	1
Greenwich,	Greenwich C. & C. Co., No. 5 & No. 8	Bore hole,	Pumped,	8,000	s 15,000	731	2
Susquehanna Twp.,	Carrolltown Coal Co.,	Rocky Run,	Pumped,		s 42,000	871	2
	Collieries Nos. 1 and 10,	Mine water,	Pumped				
	Watkins Coal Co.,	Byrnes Run, Artesian well,	46,000 gallon reservoir, gravity		s 18,000	911	1
	Duncan Spangler Coal Co.,	(Same as Barr Twp.),			s 15,000	495	1
W. Carroll Twp.,	Carrolltown Coal Co., Nos. 2 and 3	Mine,	Pumped,		s 60,000	714	2
Clearfield County							
Boardman,	Potts Run Land Co.,	Spring, Potts Run,	4,000 gallon reservoir, gravity Pumped	5,000		608	2
Coalport,	Blain Run Coal Co.,	Stream (Coalport municipal works in emergency)	Reservoir, gravity,		10,000	198	1

INDUSTRIAL WATER SUPPLIES, SECTION NO. 6 (COAL MINING COMPANIES)—Continued.

Place	Company	Source	Method	Consumption (gallons per day) Domestic	Consumption (gallons per day) Industrial	Daily amount of products, short tons	Number of collieries supplied
Clearfield County (Cont.)							
Cooper Twp.,	Clearfield Bituminous Coal Corp.	Br. of Moravian Run,	700,000 gallon reservoir,		s 30,000	967	2
		Two 6-inch wells,	Pumped				
DuBois,	Buffalo & Susquehanna Coal and Coke Co., Shaft No. 1	Sandy Lick Creek,	Pumped,	4,000 (300 pop.)	s 100,000	826	1
	Shaft No. 2,	Mine					
		Branch of Pentz Run,	1,000,000 gal, res.,			1,766	1
		Municipal Water Works,		(2,500)		363	1
Elmora,	Nant-y-Glo Coal Min. Co.,	Wells,	Pumped,	1,500b (11 fam.)	s 3,000		
Gulich Twp.,	Janesville Coal Co.,						
	Madeira Hill Coal Min. Co.,	Wilson Run Creek,	1,500,000 gallon reservoir, gravity and pumped	10,000 (300 pop.)	s 40,000	288	2
Gulich & Beccaria Twps.,	Berwind-White Coal Min. Co.,	Water Co.,			s (70,000)	1,500	4
Hawk Run,	Victoria Coal Min. Co.,				s 14,000	283	1
Knox Twp.,	Carnwath Coal Co.,	Baker Run, branch of Potts Run	100,000 gallon reservoir, gravity		s 22,000	535	1
Madera,	Corona Coal & Coke Co., Bucher Mine	Clearfield Creek,	Pumped,			222	1
Morrisdale,	Morrisdale Coal Co., (See more complete discription under Morrisdale)	Emeigh Run,	50,000,000 gallon reservoir, pumped	86,000 (800 pop.)	s 202,000	1,547	4
Munson,	Madeira Hill Coal Min. Co. (Ashman Coal Co.)			1,000 (50 pop.)	s 43,000	427	2
Penfield,	Penfield Coal & Coke Co.,	Flowing well,	Pumped,	1,500	24,000	119	1
Philipsburg, near,	Victoria Coal Min. Co.,	Citizens W. Co.,			(5,000)	221	1
Tyler,	Cascade Coal and Coke Co.,	Springs,	200,000 gallon reservoir,	7,000 (1,300 pop.)		1,166 coal	2
		Bennett Branch of Sinnemahoning Creek	Pumped,		w 350,000		
		Bennett Run,	1,750,000 gallon reservoir, gravity		s 100,000		
		Mine,	Pumped,			661 coke	
Winburne,	Irish Bros. Coal Co., No. 5,	Winburne W. Co.,			(11,600)	304	1

Elk County								
Coalville,	Penfield Coal & Coke Co.,	Spring,	Gravity,	2,000 (35 pop.)		2,000	193	1
Force,	Shawmut Min. Co.,	Br. of Cherry Run,	400,000 gallon reservoir, gravity		s	9,000	593	1
		Cherry Run (Aux.),	Pumped					
Byrnedale,	Shawmut Min. Co.,	Burns Run,	75,000 gallon reservoir, gravity	70,000 (1000 pop.)	s	73,000	1,112	2
Indiana County								
Cherry Hill Twp.,	Clearfield Bit. Coal Corp.,	Sample Run,	1,250,000 gallon reservoir, gravity		s	25,000	721	1
		8-inch drill hole,	Pumped					
Green Twp.,	Clearfield Bit. Coal Corp.,	Price Run,	1,075,000 gallon reservoir, gravity			30,000	520	1
Wilgus,	Irish Bros. Coal Co.,	Small stream, Mine				3,500		1
Total from private systems,				198,000		1,574,500		

s Water for steam purposes
c Water for cooling purposes
w Water for washing coal

ANSONVILLE (JORDAN TWP.), CLEARFIELD COUNTY

ANSONVILLE WATER COMPANY

Estimated 1915 population, 400a

LOCATION

South center Clearfield County, on Potts Run, a tributary of Clearfield Creek.

INDUSTRIES

Mining and agriculture.

WATER SUPPLY

Ansonville Water Co., incorporated 1890 for Ansonville Village.

SOURCE AND COLLECTION

From three springs on high ground, 0.75 mile southwest of village; water led to 8,000 gallon reservoir nearby.

DISTRIBUTION

By gravity; mains principally 4-inch. Pressure about 28 pounds.

CONSUMPTION

About 100 people supplied; 25 taps. Consumption not known; assuming 30 gallons per capita, would be 3,000 gallons per day.

ARCADIA (MONTGOMERY TWP.), INDIANA COUNTY

ARCADIA WATER COMPANY

Estimated 1915 population, 1,300a

LOCATION

Northeastern Indiana County, on Cush Creek, a tributary of West Branch Susquehanna River; on Pennsylvania Division of New York Central & Hudson River R. R. Elevation 1,474 to 1,602 above sea level.

INDUSTRIES

Mining.

WATER SUPPLY

Arcadia Water Co., incorporated 1901, for Montgomery Township.

SOURCE AND COLLECTION

Springs on hillside south of village; watershed area 0.9 square mile; flow collected into 800,000 gallon distributing reservoir at elevation 1602. Springs fail during dry seasons and water is pumped from tributary of Shryock Creek on which is 400,000 gallon reservoir 2 miles south of village; watershed area 4 square miles. Water pumped from reservoir by a 200 g. p. m. Cameron pump to distributing reservoir at springs. Water medium hard.

DISTRIBUTION

By gravity through about 2.5 miles of 6-inch and 4-inch mains; pressures 40 to 60 pounds; 10 fire hydrants.

CONSUMPTION

About 165 of 215 houses supplied by outside hydrants; remaining have inside fixtures. Approximately 1,200 persons supplied through 314 taps. Consumption not known; but assuming 30 gallons per capita, would be 36,000 gallons daily.

AUSTIN BOROUGH, POTTER COUNTY

MUNICIPAL WATER SUPPLY

Population 1910 census, 2,941; increase since 1900, 641. Estimated 1915, 1,500

LOCATION

Southwestern Potter County, on west Branch First Fork Sinnemahoning Creek; along Buffalo & Susquehanna R. R.

INDUSTRIES

Large paper and pulp mill.

WATER SUPPLY

By municipal system.

SOURCE AND COLLECTION

Several springs and 5-inch drilled well within borough limits; water flows by gravity into 24,000 gallon main collecting basin at pumping station; pumped to 236,000 gallon equalizing reservoir on hill in borough 200 feet above business district. Pumping equipment as follows: Two 634,000 gallon Deane triplex pumps; two 20 hp. Struthers-Wells gas engines, with two gasoline engines in reserve.

DISTRIBUTION

By gravity; pressures 120 to 140 pounds; 34 fire hydrants, 6-inch and 4-inch.

CONSUMPTION

About 1,350 persons supplied through 370 taps. Consumption not known; assuming 60 gallons per capita, would be 81,000 gallons daily.

HISTORICAL

Borough originally supplied by Lumber City Water Co., incorporated 1890 for Austin Borough; water from two streams, two drilled wells and one spring. Potter County Water Co., incorporated 1897 for Austin Borough, bought out Lumber City Water Co., taking over its supply. Its charter was annulled 1904 by court decree on account of insufficient and impure supply of water; notwithstanding this it continued to supply the borough under the charter of the Lumber City Water Co., until 1909, when the Supreme Court decreed that the Lumber City Water Co. ceased to exist upon its sale to Potter County Water Co.

The dam of Bayless Pulp and Paper Co. (now Bayless Mfg. Co.), on Freemans Run, failed on September 30, 1911, causing disaster in borough and rendering water sources unsafe.

Emergency supply was obtained from Vannetta, Covil and Austin springs, all within a radius of 2,000 feet of pumping station. A 4-inch main led from Vannetta Spring, with 2-inch connection with other springs.

INDUSTRIAL SUPPLIES

Bayless Manufacturing Corporation obtains supply from 60,000,000 gallon reservoir formed by 24-foot rock filled timber crib dam on Freemans Run, about 2 miles above paper mill; furnished to mills by gravity. Minimum daily flow, as determined by weir measurement

by T. C. Bayless, 200,000 gallons. Supply not sufficient for needs of mills, which have to shut down for various periods during summer months at low water. Water used principally for washing pulp and conveying wood fibers to various parts of mill; average 2,000,000 gallons daily, 95% discharged into stream with but slight change in temperature. At times, locomotives of Buffalo & Susquehanna R. R. supplied by this system.

BAKERTON (CARROLL TWP.), CAMBRIA COUNTY

BAKERTON WATER COMPANY

Estimated population 1915, 1,000

LOCATION

Northwestern Cambria County near headwaters of West Branch Susquehanna River; along Cresson Division of Pennsylvania R. R. In mountain district.

INDUSTRIES

Agricultural and mining district.

WATER SUPPLY

Bakerton Water Co., incorporated 1901 for Carroll Township.

SOURCE AND COLLECTION

Water collected from springs 0.75 mile east of village, in small reservoir; area of watershed 1 square mile. During dry seasons water obtained by pumping into reservoir from two deep wells nearby. Water soft.

DISTRIBUTION

By gravity through 0.75 mile of mains, principally 4-inch; pressures 35 to 60 pounds; 1 fire hydrant, 3-inch.

CONSUMPTION

About 1,000 persons supplied through 100 taps. Consumption as measured by pump displacement, 216,000 gallons daily; about two-thirds industrial and one-third domestic.

BARNESBORO BOROUGH, CAMBRIA COUNTY

MUNICIPAL WATER WORKS

Population 1910 census 3,535; increase since 1900, 2,053. Estimated 1915, 4,000a

LOCATION

Northwestern Cambria County, on West Branch of Susquehanna River about 2 miles below Spangler; along Cresson Division of Pennsylvania R. R.

INDUSTRIES

Principally mining and lumbering.

WATER SUPPLY

Water purchased from Madeira Coal Mining Co., and distributed through municipal system, borough having purchased distribution system from Northern Cambria Water Co., in 1913.

SOURCE AND COLLECTION

Pumped temporarily from sump in bottom of mine—no mine drainage. Will soon obtain supply by pumping from deep well.

DISTRIBUTION

By pumping through 3 miles of mains, principally 6-inch and 4-inch; average pressure 70 pounds; 27 fire hydrants.

CONSUMPTION

About 1,000 people supplied by 115 taps, 7 metered. Average daily consumption said to be 50,000 gallons, entirely domestic.

COST AND REVENUE

Gross revenue, $2,500; annual operating expenses, $1,500.

BLANDBURG (READE TWP.), CAMBRIA COUNTY

BLANDBURG WATER COMPANY
(Pennsylvania R. R. Co.)

Estimated 1915 population, 800b

LOCATION

Extreme northeastern Cambria County, near headwaters of Powell Run, tributary of Clearfield Creek; station called Figart, on Bellwood Division of Pennsylvania R. R.

INDUSTRIES

Coal and clay mines and brick works of Harbison-Walker Refractories Co.; several small coal mines.

WATER SUPPLY

Blandburg Water Co., incorporated 1905 for Reade Twp.; controlled by Pennsylvania R. R.

SOURCE AND COLLECTION

Figart Run; 500,000 gallon impounding reservoir southeast of village and 100 feet above.

DISTRIBUTION

By gravity through 10-inch main; 1.2 miles distributing mains, 4-inch to 10-inch; no fire hydrants.

CONSUMPTION

Supply to 24 taps. Stated average daily consumption 50,000 gallons, 36,000 gallons industrial to Pennsylvania R. R. No means of measurement.

BYRNEDALE (JAY TWP.), ELK COUNTY

SHAWMUT MINING COMPANY

Estimated population, 1,000

LOCATION

Southern Elk County, on Kersey Run; along Pittsburgh, Shawmut & Northern R. R.

INDUSTRIES

Coal mining.

WATER SUPPLY

Private supply of Shawmut Mining Co.

SOURCE AND COLLECTION

A 75,000 gallon reservoir 1 mile northwest of village, on Burns Run, tributary of Kersey Run; watershed area 7 square miles. Water soft.

DISTRIBUTION

By gravity through 1.5 miles of 6-inch pipe to village; 0.87 mile 4-inch laterals; pressures 30 to 75 pounds; 20 fire hydrants, 3-inch.

CONSUMPTION

About 1,000 people supplied through 85 taps. There are 202 company houses, a hotel and a few private houses; practically all supplied with water by outside hydrants. Average daily consumption stated to be 143,000 gallons, 49% domestic and 51% industrial, water being supplied to mines of Shawmut Mining Co.

INDUSTRIAL SUPPLIES

The Shawmut Mining Co. obtains a supply for its boilers from Caledonia Run during freshet; at other times run is dry and supply obtained from town water.

CARROLLTOWN BOROUGH, CAMBRIA COUNTY

MUNICIPAL WATER SUPPLY

Population 1910 census, 1,348; increase since 1900, 558. Estimated 1915, 1500

LOCATION

Northern Cambria County, on watershed between headwaters of West Branch Susquehanna River and Chest Creek, in mountain district.

INDUSTRIES

Lumbering and agriculture.

WATER SUPPLY

Municipal works.

SOURCE AND COLLECTION

Springs and deep well about 0.5 mile north of town. Flow decreases in summer. Water medium hard.

DISTRIBUTION

By pumping through 6-inch main reducing to 4-inch; pressures 12 to 60 pounds. Distributing mains about 3 miles, principally 6-inch and 4-inch; 28 fire hydrants, 2½-inch.

CONSUMPTION

Entire population of 1,500 supplied through 225 taps. Average daily consumption in 1913, determined by pump displacement, 40,000 gallons, or 27 gallons per capita, entirely domestic; maximum 50,000 gallons.

COST AND REVENUE

Cost of works, $18,000; gross annual revenue, $1,500; operating expenses, $1,200.

CHERRYTREE BOROUGH, INDIANA COUNTY

CHERRYTREE WATER COMPANY

Population 1910 census, 439; increase since 1900, 127. Estimated 1915, 500

LOCATION

Eastern Indiana County, on West Branch of Susquehanna River; along Cresson Division of Pennsylvania R. R. and New York Central R. R.

INDUSTRIES

Iron works, railroad junction, New York Central R. R. yards.

WATER SUPPLY

Cherrytree Water Co., incorporated 1903 for Cherrytree Borough.

SOURCE AND COLLECTION

Peg Run, small tributary of West Branch Susquehanna River 1.5 miles south of borough; about 0.5 mile above mouth of run is 7,000,000 gallon reservoir; watershed area 1,200 acres. Supply decreases in summer, augmented by pumping from Cushion Creek, near its mouth.

DISTRIBUTION

By gravity through 8-inch main and 4-inch laterals; pressures 60 to 65 pounds. Distributing mains as follows:

Size (inches),	8	6	4	Total
Length (miles),	2	0.5	0.5	3

Twelve fire hydrants, 2-inch.

CONSUMPTION

About 350 persons supplied through 85 taps. Estimated average daily consumption 100,000 gallons; maximum 150,000 gallons, 50% industrial.

INDUSTRIAL

The iron company obtains supply from Killins Creek. The Pennsylvania R. R. obtains supply for track tank at mouth of stream from Peg Run; intake below reservoir of Cherrytree Water Co. For amount used, see railroad list.

CLEARFIELD BOROUGH, PART OF LAWRENCE TOWNSHIP, CLEARFIELD COUNTY

CLEARFIELD WATER COMPANY

Population 1910 census, 6,851; increase since 1900, 1,770. Estimated 1915, 8,500

LOCATION

North of central Clearfield County, on Clearfield Creek, along Tyrone Division of Pennsylvania R. R., Buffalo, Rochester & Pittsburgh Ry., and New York Central & Hudson River R. R.

INDUSTRIES

Railroad repair shops, machine shops and foundry, brewery, fire brick works, sewer pipe works, planing mill, laundry, woodenware works, novelty works and silk mill.

WATER SUPPLY

Clearfield Water Co., incorporated 1882 for Clearfield Borough. Supplies Clearfield Borough (part of which was West Clearfield Borough) and suburbs in Lawrence Township. Lawrence Water Co., incorporated 1902 for Lawrence Township, sold in 1904 to Clearfield Water Co.

SOURCE AND COLLECTION

(1) Moose Creek, 3 miles north of borough, 16,000,000 gallon reservoir; watershed area 7.9 square miles.

(2) Montgomery Creek, 52,000,000 gallon reservoir 4.5 miles northeast of borough; watershed area 9.4 square miles.

Water soft. Measurement, by weirs in streams, as follows:

Date	Montgomery Creek (gals. daily)	Moose Creek (gals. daily)
1904,	2,297,600	550,000
Fall of 1908,	500,000	200,000

DISTRIBUTION

(1) By gravity from Moose Creek through 2.7 miles of 16-inch mains, reducing to 14-inch, 10-inch and 8-inch.

(2) By gravity from Montgomery Creek through 4.5 miles of 20-inch mains, reducing to 12-inch and 10-inch; laterals 12-inch, 10-inch, 8-inch, 6-inch and 4-inch. Distributing and supply mains as follows:

Size (inches),	20	16	14	12	10	8	6	4	less than 4	Total
Length (miles),	0.2	0.3	0.3	6.0	7.1	4.1	3.2	11.5	1.0	33.7
Per cent.,	(	2	)	18	21	12	9	35	3	100

Maximum pressure 80 pounds; 100 fire hydrants, 4-inch.

CONSUMPTION

About 8,000 people supplied through 1,860 taps. Estimated average daily consumption 1,500,000 gallons; maximum 1,700,000 gallons; 45% domestic and 55% industrial.

All manufactories and large users metered. Both supply lines and commercial, semicommercial and domestic consumers to be metered during 1914. Metered consumption 2,300 gallons domestic through 9 meters, and 740,000 gallons through 42 meters.

New York Central & Hudson River R. R. yards and shops use about one-third total industrial; brick works use 60,000 gallons daily.

INDUSTRIAL

Elk Tanning Co. obtains supply from drilled well for industrial use and from Clearfield Water Co. for domestic use. A 5-inch and 4-inch main leads from well to works. Total estimated consumption is 300,000 gallons per day, about 6,000 gallons domestic.

COALPORT BOROUGH, CLEARFIELD COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 876; decrease since 1900, 62. Estimated 1915, 850

LOCATION

Southern Clearfield County, on Clearfield Creek and Cresson & Bellwood Divisions of Pennsylvania R. R.

INDUSTRIES

Mining and small feed and grist mills.

WATER SUPPLY

Municipal works operated since 1904.

SOURCE AND COLLECTION

Two drilled wells on west side of borough, 8-inch diameter, 70 and 128 feet deep. Water pumped through 5-inch pipe to 50,000 gallon reservoir on top of hill north of pumping station. Pumps operated 6 hours per day, capacity 150,000 gallons per 24 hours.

DISTRIBUTION

By gravity through 6-inch pipe; 4-inch laterals; maximum pressure 80 pounds.

CONSUMPTION

About 500 people supplied. Average daily consumption 25,000 gallons; minimum 20,000, maximum 30,000. Blair Run Coal Co. purchases 10,000 gallons per day during dry season.

INDUSTRIAL

The Blair Run Coal Co. has reservoir on small stream to supply mine, using about 10,000 gallons per day. During dry season it purchases supply from municipal plant.

COSTELLO VILLAGE (PORTAGE TWP.), POTTER COUNTY

PRIVATE SUPPLY

Estimated population 1915, 1,000a

LOCATION

Southwestern Potter County, on First Fork Sinnemahoning Creek just south of Austin Borough; on Buffalo & Susquehanna R. R.

INDUSTRIES

Camden Tannery (suspended) and Costello Extract Works of Elk Tanning Co.

WATER SUPPLY

Private system of Elk Tanning Co.

SOURCE AND COLLECTION

From nine springs, seven southwest of tannery, in Youngs Hollow, and two southeast; former collected in 12,000 gallon reservoir and latter in 880 gallon reservoir.

DISTRIBUTION

From large reservoir through 0.5 mile of 3-inch pipe, and from small basin through 0.5 mile of 2-inch pipe.

CONSUMPTION

About 600 out of total population of 1,000 supplied. Consumption not known; assuming per capita consumption of 30 gallons, would amount to 18,000 gallons daily.

INDUSTRIAL SUPPLIES

Costello Extract Works (Elk Tanning Co.) obtains 600,000 gallons daily by pumping from First Fork Sinnemahoning Creek to tannery, through condenser and back to stream.

Camden Tannery (Elk Tanning Co.) obtains 450,000 gallons per day by gravity from First Fork Sinnemahoning Creek; tannery not in operation at present.

CURWENSVILLE BOROUGH, CLEARFIELD COUNTY

CURWENSVILLE WATER COMPANY

Population 1910 census, 2,549; increase since 1900, 612. Estimated 1915, 3,000a

LOCATION

West central Clearfield County, on West Branch of Susquehanna River; along Buffalo, Rochester & Pittsburgh R. R., New York Central & Hudson River and Tyronė Division of Pennsylvania R. R.

INDUSTRIES

Mining, brick works and two large tanneries.

WATER SUPPLY

Curwensville Water Co., incorporated 1889 for Curwensville Borough; reorganized 1906.

SOURCE AND COLLECTION

(1) Small intake dams on Elkhorn, Leidic and Hartshorn runs, 2 to 3 miles north of borough. Water discharged through 8,000 feet of 10-inch pipe into 8-inch delivery main 1 mile from borough, thence 8,000 feet through borough pipe system to 750,000 gallon distributing reservoir, elevation 225 feet above borough and 0.75 mile from its center; watershed area 4 square miles.

(2) To augment No. 1 in periods of low yield, and for emergency, water pumped from small intake dam on Anderson Creek, 1 mile northwest of borough, through about 3,000 feet of 6-inch pipe to receiving basin near center of borough. From this basin it is pumped through 3,000 feet of 6-inch pipe into the 750,000 gallon reservoir. Tributary drainage area above intake, 25 square miles. Pumping plant has following units: One 650,000 gallon steam Worthington compound pump, one 100 hp. Erie boiler, one 100 hp. General Electric alternating current motor and one 5-inch, three stage 1,100,000 gallon DeLaval turbine pump. Water soft.

DISTRIBUTION

By gravity; distributing mains as follows:

Size (inches),	6	4	3	2	1½	Total
Length (miles),	2.71	2.28	0.19	0.64	0.76	6.58

Pressures 85 to 100 pounds; 41 fire hydrants, 4-inch.

CONSUMPTION

About 2,000 persons supplied; 425 taps. Average daily consumption measured by pump displacement 250,000 gallons, 75% domestic and 25% industrial. Twenty-five taps are industrial and metered.

INDUSTRIAL

Elk Tanning Co. obtains supply from Anderson Creek and from wells; water pumped through 4-inch pipe from creek for boiler use and from well for other uses. Total estimated consumption 300,000 gallons per day.

DRIFTWOOD BOROUGH, CAMERON COUNTY

DRIFTWOOD WATER COMPANY

Population 1910 census, 517; increase since 1900, 8. Estimated 1915, 525

LOCATION

Southeastern Cameron County, at junction of Driftwood Branch and Bennett's Branch of Sinnemahoning Creek; along Erie and Allegheny Divisions of Pennsylvania R. R.

INDUSTRIES

Tannery and railroad.

WATER SUPPLY

Driftwood Water Co., incorporated 1899 for Driftwood Borough.

SOURCE AND COLLECTION

Nanny's Run, tributary of Bennett Branch; intake dam 1.5 miles southwest of borough and 2.5 miles above mouth of stream. A 6-inch main 3 miles long leads from intake to 8-inch outlet of 600,000 gallon equalizing reservoir on hill 0.25 mile north of center of borough. Water soft.

DISTRIBUTION

By gravity through 4 miles of 8-inch, 6-inch and 4-inch mains; 8-inch main from reservoir to borough; 6-inch leads into 8-inch and feeds system direct, excess backing up into reservoir; watershed area about 4 square miles. Pressures 45 to 80 pounds; distributing mains about 25% 6-inch and 75% 4-inch; 19 fire hydrants 4-inch.

CONSUMPTION

About 520 persons supplied; 121 taps. Average daily consumption stated to be 125,000 gallons, 115,000 industrial. A few taps outside borough and two industrial taps in borough for Pennsylvania R. R. and tannery. Tannery uses 100,000 gallons daily and railroad 15,000 gallons.

DUBOIS BOROUGH, CLEARFIELD COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 12,623; increase since 1900, 3,248. Estimated 1915, 14,350

LOCATION

Northwestern Clearfield County, along Sandy Lick Creek, tributary of Red Bank Creek; on Pennsylvania R. R., Buffalo, Rochester & Pittsburgh R. R., Buffalo & Susquehanna R. R. and DuBois Electric & Traction Co. Borough in rolling district; range in elevation 200 feet, low part at elevation 1,400 above sea level.

(This borough is in Section No. 17, Middle Allegheny Sub-basin, but its source of supply is in Section No. 6.)

INDUSTRIES

Coal mining; shop, locomotive works and repair shops of Buffalo, Rochester & Pittsburgh R. R.; gas engine works, machine shops, tannery, grist mills, woodworking factories, clay works, brewery, ice plant, glass works, overall factory.

WATER SUPPLY

Municipal works purchased in 1896 from DuBois City Water Works Co., incorporated 1890.

SOURCE AND COLLECTION

An 86,270,000 gallon reservoir 8 miles east of borough, on Anderson Creek, a tributary of West Branch Susquehanna River, and 50 feet above high part of borough; watershed area over 30 square miles. Water soft.

DISTRIBUTION

By gravity through 3.5 miles 20-inch main and 3.3 miles 16-inch main, carried through ridge by tunnel 0.7 mile long. Distributing mains as follows:

Size (inches),	12	10	8	6	4	2	Total
Length (miles),	1.1	0.2	1.3	19.2	2.7	0.1	24.6
Per cent.,	(5)		5	78	11	1	100

Pressures 20 to 90 pounds; 175 fire hydrants, 4-inch.

CONSUMPTION

About 10,000 persons in borough and 1,000 in suburbs supplied through 2,246 taps. Stated average daily consumption 806,000 gallons; maximum 973,000 gallons; 250,000 industrial, and 556,000 domestic; determined by metering domestic and industrial supply and estimating that used for public purposes from pressures and size of pipes; 2,200 taps, or 99%, metered, 18 industrial. Metered consumption 250,000 gallons daily industrial, 347,000 gallons domestic.

COST AND REVENUE

Total cost of works, $333,000; annual operating expenses (1913), $17,000; gross revenue (1913), $33,400.

ELK COUNTY HOME (BENZINGER TWP.), ELK COUNTY

PRIVATE SUPPLY

Estimated population 125

LOCATION

Eastern Elk County, at headwaters of West Creek; along Pittsburgh, Shawmut & Northern R. R. and Erie Division of Pennsylvania R. R.

WATER SUPPLY

Three springs and drilled well; 3-inch line into 9,900 gallon reservoir 1.5 miles north of Home. Supply insufficient during drought of 1908. Water soft.

DISTRIBUTION

By gravity through 3-inch line to Home; pressures 40 to 45 pounds; 1 fire hydrant, 2-inch.

CONSUMPTION

About 125 persons supplied. Stated average daily consumption 3,000 gallons, 90% domestic. No means of measurement.

EMPORIUM BOROUGH, CAMERON COUNTY.

EMPORIUM WATER COMPANY

Population 1910 census 2,916; increase since 1900, 453. Estimated 1915, 3,000a

LOCATION

Northwest central Cameron County, at junction of Driftwood Branch of Sinnemahoning Creek and West Creek; on Erie Division of Pennsylvania R. R.

INDUSTRIES

Foundry and furnace, incandescent lamp works, planing mill, saw mill and tannery; nearby, three powder and nitroglycerine works.

WATER SUPPLY

Emporium Water Co., incorporated 1886 for Emporium Borough.

SOURCE AND COLLECTION

Sources of supply are (1) Towner Run, (2) West Creek, (3) Salt Run.

(1) Towner Run, 3 miles west of borough about 0.75 mile above mouth, impounding reservoir, capacity 1,200,000 gallons; watershed 300 acres.

(2) Pumping station on West Creek just below where Towner Run enters, built for auxiliary purposes; water pumped to mechanical gravity filtration plant; 8-inch main from stream to pump well.

Pumping installation; 2 centrifugal raw water pumps, one 500,000 gallons and one 1,250,000 gallons; 2 circular subsidence tanks, each 81,400 gallons; 2 unit filter tanks, each 500,000 gallons; clear water well, 42,000 gallons; 2 Dean steam clear water pumps, 186,000 and 430,000 gallons. Subsidence tank gives 4 hours subsidence at usual rate of operation.

(3) Salt Run, 16,000 feet northeast of eastern end of borough, small intake dam, 30,000 gallon capacity; 3,500 feet above intake a storage reservoir, 35,000,000 gallons capacity, connected to intake dam by 6-inch pipe; watershed area about 2 square miles. Water soft.

DISTRIBUTION

(1) By gravity from Towner Run reservoir through 3.6 miles of 8-inch main.

(2) By pumping from filtration plant into 8-inch line from Towner Run reservoir; excess backs up into reservoir.

(3) By gravity from Salt Run through 4.6 miles of 6-inch pipe.

Laterals are 6-inch and 4-inch. Total length of distributing mains in borough, 15.4 miles, divided as follows:

Size (inches),	12	8	6	4	Total
Length (miles),	2.8	2.7	5.0	4.9	15.4
Per cent.,	18	18	32	32	100

Pressure 65 to 105 pounds; 36 fire hydrants, 4-inch.

CONSUMPTION

About 2,700 persons supplied, including some outside of Emporium; 500 taps in borough and 20 outside along Salt Run and Towner Run lines. Stated average daily consumption 252,000 gallons, 16,000 used outside borough; 60% domestic and 40% industrial. No means of measurement.

GALLITZIN BOROUGH, CAMBRIA COUNTY

CAMBRIA COUNTY WATER SUPPLY COMPANY
(Pennsylvania Coal and Coke Corporation)

MUNICIPAL WATER WORKS

Population 1910 census 3,504; increase since 1900, 745. Estimated 1915, 3,900b

LOCATION

Central eastern Cambria County, at headwaters of Clearfield Creek; on Pennsylvania R. R., Pittsburgh Division.

WATER SUPPLY

(1) Gallitzin Water Co., incorporated 1888 for Gallitzin Borough; subsidiary of Cambria County Water Supply Co., incorporated 1900 for County of Cambria. The latter is holding company for water supplies and condemnations in Cambria County of Pennsylvania, Beech Creek & Eastern Coal Co., taken over in 1908 by Pennsylvania Coal and Coke Co.; which went into hands of receiver. The Clearfield Bituminous Coal Corp. now owns all properties, including water

companies, which at present are operated under lease by Pennsylvania Coal and Coke Corp. Cambria County Water Supply Co. operates in Cambria County through charters of 13 other water companies as shown in following table, some of charters not being used at present; five companies for Indiana County are listed. Several independent systems serve communities at groups of collieries in same general region; described separately under section in which source of supply is located.

Name	Sect. No.	Inc.	Date Purc.	Incorporated for	Purpose
By purchase of property and franchises—					
Allegheny Twp. W. Co., --	6	1900	1900	Allegheny Twp., ----------	Combined
Croyle Twp. W. Co., ----	18	1900	1900	Croyle Twp., ----------	Combined
Summerhill Boro. W. Co.,	18	1900	1900	Summerhill Boro., ----------	Combined
West Branch W. Co., ----	18	1900	1900	Summerhill Twp., ----------	Combined
By lease—					
Beaverdam W. Co., -------	6	1902	--------	Gallitzin Twp., ----------	Domestic
Conner W. Co., ----------	18	1905	--------	Cambria Twp., ----------	Domestic
Forest W. Co., ----------	18	1901	--------	Croyle Twp., ----------	Combined*
Gallitzin W. Co., ----------	6	1888	--------	Gallitzin Boro., ----------	Domestic
Henrietta W. Co., --------	6	1902	--------	Barr Twp., ----------	Domestic
Nanty-Glo W. Co., --------	18	1902	--------	Jackson Twp., ----------	Domestic
North Branch W. Co., ----	18	1901	--------	Summerhill Twp., ----------	Combined (*)
Senwick W. Co., ----------	18	1902	--------	Jackson Twp., ----------	Domestic
Wildwood W. Co., --------	6	1901	--------	Cresson Twp., ----------	Combined (*)
Charters held for Indiana County—					
Cloverdale W. Co., -------	17	1903	--------	Grant Twp., ----------	Domestic
Cherry Hill W. Co., ------	18	1903	--------	Cherry Hill Twp., ----------	Commercial
Woodward W. Co., ------	18	1903	--------	Cherry Hill Twp., ----------	Domestic
Commercial W. Co., ------	18	1903	--------	Greene Twp., ----------	Commercial
Highland W. Co., --------	17	1903	--------	Grant Twp., ----------	Commercial

(*) For both domestic and industrial purposes.

GALLITZIN WATER COMPANY

SOURCE AND COLLECTION

Small stream tributary to Bradley Run, 2 miles northwest of borough, is diverted through bore hole into mine; watershed area 1 square mile. Water carried through mines of Pennsylvania Coal and Coke Corp. and then pumped by 2,000,000 gallon duplex steam pumps to 400,000 gallon distributing reservoir just north of borough. Supply inadequate in summer season. Water soft.

DISTRIBUTION

By gravity from distributing reservoir through 1.36 miles of 6-inch mains. Distributing mains:

Size (inches), ----------	6	4	3	2½	2	1	Total
Length (miles), ----------	1.72	2.45	0.75	0.06	0.47	0.09	5.54

Twenty-one fire hydrants, all 4-inch.

CONSUMPTION

About 3,000 persons supplied through 434 taps. Consumption not known; assuming 50 gallons per capita, would be 150,000 gallons daily.

MUNICIPAL WATER WORKS

Supply obtained by purchase from Summit Water Supply Co., subsidiary of Pennsylvania R. R. Co. Average daily consumption by meter 37,000 gallons; on basis of 50 gallons per capita, would indicate about 750 consumers.

GLEN CAMPBELL BOROUGH, INDIANA COUNTY

GLEN WATER COMPANY

Population 1910 census, 1,099; decrease since 1900, 529. Estimated 1915, 1,200

LOCATION

Northeastern Indiana County, along tributary of Cush Creek, on Cresson Division of Pennsylvania R. R. Mining district.

WATER SUPPLY

Glen Water Co., incorporated 1899 for Glen Campbell Borough.

SOURCE AND COLLECTION

Supply from Brady Run by gravity; small intake 1.3 miles above mouth; 350 feet 6-inch tile pipe to 75,000 gallon reservoir alongside of stream; watershed area 1.6 miles. From reservoir water flows by gravity to pumping station, and forced through 6-inch main to two wooden tanks, 35,000 gallons capacity each, elevation about 200 feet above borough.

Pumping station and boiler house are frame buildings along Brady Run, and contain one steam boiler about 25 hp. one Riley 1,000,000 gallon direct acting pump, one 220 volt 21 hp. Westinghouse motor direct-connected to double acting pump.

DISTRIBUTION

By gravity; distributing mains as follows:

Size (inches),	6	4	3	Total
Length (miles),	1.2	1.4	0.1	2.7

Pressures 100 to 125 pounds; 24 fire hydrants $2\frac{1}{2}$-inch.

CONSUMPTION

About 900 persons supplied; 213 taps, one metered using 10,000 gallons per day. Average daily consumption, determined by pump displacement, 50,000 gallons, 90% domestic.

HASTINGS BOROUGH, CAMBRIA COUNTY

MUNICIPAL WATER WORKS

HASTINGS WATER COMPANY

Population 1910 census, 2,125; increase since 1900, 504. Estimated 1915, 2,902

LOCATION

Northern Cambria County, on Brubaker Run, about 4 miles above junction with Chest Creek; on Cresson Division of Pennsylvania R. R. Mining district.

WATER SUPPLY

(1) Municipal works completed in 1905.
(2) Hasting Water Co., incorporated 1891 for Hastings Borough.

MUNICIPAL WATER WORKS

SOURCE AND COLLECTION

Springs 2,000 feet north of borough; water through 4-inch main to 80,000 gallon storage reservoir; works capable of furnishing 80,000 gallons daily; watershed area about 6 square miles. Water medium hard.

DISTRIBUTION

By pumping through approximately 4.5 miles of mains. Pumping plant one Dean 575,000 gallon pump, one Erie and one Keller boiler. Pressures average about 100 pounds; 22 fire hydrants 3-inch.

CONSUMPTION

About 1,900 persons supplied; 275 taps. Stated average daily consumption 60,000 gallons; maximum 75,000 gallons, all domestic.

COST AND REVENUE

Cost of works, $30,000; annual operating expenses, $2,000; gross revenue, $900.

HASTINGS WATER COMPANY

SOURCE AND COLLECTION

Storage reservoir on Scotch Run, capacity 9,000,000 gallons, 1 mile southeast of borough; watershed area 1,000 acres.

DISTRIBUTION

By gravity through mains principally 6-inch; maximum pressure about 70 pounds.

CONSUMPTION

About 500 persons supplied. Minimum daily consumption estimated at 13,200 gallons, 25% industrial; domestic consumption averages 21 gallons per capita.

HOUTZDALE, BRISBIN AND RAMEY BOROUGHS AND VICINITY, CLEARFIELD COUNTY

HOUTZDALE WATER COMPANY.

	Population 1910 census	Increase since 1900	Estimated 1915
Houtzdale Borough,	1,434	48	1,450
Brisbin Borough,	459	—207	
Ramey Borough,	1,045	179	
Woodward Township,	2,535	—634	
Bigler Township,	4,013	1,338	
Gulich Township,	2,112	1,041	
Smoke Run District of Gulich and Bigler Townships,			

LOCATION

Southeastern Clearfield County, along Beaver Run; on Susquehanna River; Tyrone Division Pennsylvania R. R. and Pittsburgh & Susquehanna R. R.

INDUSTRIES

Mining; distillery and grist mill.

WATER SUPPLY

Houtzdale Water Co., incorporated 1887; operates in territory around Houtzdale through charters of two controlled companies as follows:

Company	Inc.	Incorporated for
Houtzdale Water Co.,	1887	Houtzdale Borough
Ramey Water Co.,	1909	Ramey Borough, Smoke Run district of Bigler and Gulich townships
West Houtzdale Water Co.,	1908	Woodward Township and part of Brisbin Boro, and Gulich Township

SOURCE AND COLLECTION

Mountain Branch stream, a branch of Moshannon Creek; dam across stream 3 miles above mouth forms 50,000 gallon reservoir; drainage area 5 square miles; elevation 225 feet above business district and 50 feet above old 750,000 gallon distributing reservoir on hill above borough of Houtzdale, storing water of drilled well (which source was abandoned 1908).

Surplus from 8-inch main leading from storage reservoir to borough backs up into old distributing reservoir. Water soft.

DISTRIBUTION

By gravity through 17.9 miles of supply and distributing mains as follows:

Size (inches),	8	6	4	3	2	1½ & 1¼	Total
Length (miles),	6.0	2.1	4.9	.6	2.4	1.9	17.9
Per cent.,	34	12	27	(	27	)	100

Pressures 30 to 100 pounds; 30 fire hydrants in Houtzdale and 20 in Ramey, 3-inch.

CONSUMPTION

Location	Taps	People supplied	Meters	Consumption		
				Domes.	Indus.	Total gals.
Houtzdale Boro.,	400	1,434a		75%	25%	200,000
Ramey Boro. and Smoke Run district of Bigler and Gulich twps.,	205	1,800a	2	25%	75%	100,000
Woodward Twp. and part of Brisbin Boro. and Gulich Twp.,	175	1,800a		100%		25,000
Total,		5,034a				325,000

LANSFORD & COALDALE BOROUGHS, CARBON AND SCHUYLKILL COUNTIES

PANTHER VALLEY WATER COMPANY

Source of supply in Middle Delaware Sub-basin, Section No. 2 (q. v.)

MADERA (BIGLER TWP.), CLEARFIELD COUNTY

MADERA WATER COMPANY

Estimated population 1915, 1,500

LOCATION

Southeastern Clearfield County, on Clearfield Creek; along Tyrone Division of Pennsylvania R. R. and New York Central & Hudson River R. R. Mining district.

WATER SUPPLY

Madera Water Co., incorporated 1904 for Madera.

SOURCE AND COLLECTION

From four springs, three of which are near headwaters of tributary of Muddy Run, about 1.5 miles south of village, where 125,000 gallon reservoir is located. Water piped into reservoir through 4-inch pipe. Water from another spring piped into 10-inch main from reservoir about 0.75 mile south of Madera. Area of watershed about 5 square miles. Water soft.

DISTRIBUTION

By gravity through 3 miles of 10-inch, 4-inch and 2-inch mains; pressures 30 to 70 pounds; 7 fire hydrants, 2½-inch.

CONSUMPTION

About 750 people supplied; 176 taps. No data as to consumption; assuming 40 gallons per capita, would be about 30,000 gallons daily.

MAHAFFEY BOROUGH, CLEARFIELD COUNTY

PRIVATE SUPPLIES

Population 1910 census, 754; increase since 1900, 13. Estimated 1915, 760.

LOCATION

Western Clearfield County, on West Branch of Susquehanna River and Chest Creek; on New York Central & Hudson River R. R. and Cresson and Bellwood Divisions of Pennsylvania R. R.

INDUSTRIES

Mining and tanning.

WATER SUPPLIES

(1) Mahaffey Bros.; water from mountain spring collected in four reservoirs, two of 16,000 and 10,000 gallons capacity, on hill west of borough, and two of 10,000 and 5,000 gallons capacity, on hill east of borough. Distributed by gravity through 3-inch and 2-inch mains. Hotel and probably 40 persons supplied; consumption not known.

(2) H. L. Dennison; water for hotel obtained from spring feeding small reservoir.

(3) Mrs. Emorty Mahaffey; water from springs feeding small reservoir; four houses supplied.

MORRISDALE (MORRIS TWP.), CLEARFIELD COUNTY

PRIVATE SUPPLY

Estimated population 1,100a

LOCATION

Eastern Clearfield County, on branch of Emigh Run; along New York Central & Hudson River R. R. Mining district.

WATER SUPPLIES

Morrisdale Coal Co., private supply; in operation since 1898.

SOURCE AND COLLECTION

Emigh Run, 2.5 miles southwest of village; 50,000,000 gallon storage reservoir of 11 acres. Water pumped from reservoir to 10,000 gallon tank on hill nearby. Pumping installation, one Cameron No. 9, 216,000 gallon pump, one Canton duplex, 216,000 gallon pump, two Erie return tubular boilers, 100 hp. each. Area of watershed 250 acres. Water soft.

DISTRIBUTION

By gravity to houses in village and by pumping to mines. Distributing mains as follows:

Size (inches),	5	4	3	2	Total
Length (miles),	0.34	0.13	2.29	0.76	3.52

Pressures 60 to 135 pounds; 10 fire hydrants, $\frac{3}{4}$-inch.

CONSUMPTION

About 800 people supplied through 80 taps. Average daily consumption about 288,000 gallons; maximum 300,000 gallons; measured by pump displacement; 70% industrial and 30% domestic.

OSCEOLA BOROUGH, CLEARFIELD COUNTY, MONTOLA AND RUSH TOWNSHIP, CENTRE COUNTY

OSCEOLA WATER SUPPLY COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915	Supplied
Osceola,	2,437	407	2,450	2,000
Montola and Rush Township,				500

LOCATION

Southeastern Clearfield County and western Centre County, on west branch of Moshannon Creek; traversed by Tyrone Division of Pennsylvania R. R. and Pittsburgh & Susquehanna R. R.

INDUSTRIES

Coal mining, foundries, machine and car shops, brick works and planing mill.

WATER SUPPLY

Osceola Water Supply Co., incorporated 1889 for Osceola Mills, Clearfield County; operates in Rush Township, Centre County, through its subsidiary, Montola Water Co., incorporated 1905.

SOURCE AND COLLECTION

Trout Run, Centre County; two reservoirs, the upper 4 miles and the lower 3.5 miles south of borough, capacities 364,000 and 1,260,000 gallons respectively; watershed area about 5 square miles. Water soft.

DISTRIBUTION

By gravity through 4.5 miles of 10-inch main, reducing to 8-inch, leading from upper reservoir, and 8-inch main 3 miles long from lower reservoir to town. By cross connections supply can be drawn from either reservoir. Distributing mains as follows:

Size (inches),	6	4	2	Total
Length (miles),	2.27	1.89	1.51	5.67

Pressures 20 to 90 pounds; 25 fire hydrants, 6-inch.

CONSUMPTION

Supply to 2,600 persons in Osceola and outside borough; 400 taps; 600 persons in Montola and Rush Township; consumption 500,000 gallons, 30% domestic and 70% industrial of which Pennsylvania R. R. uses 150,000 gallons and brick works 10,000.

PATTON BOROUGH, CAMBRIA COUNTY

PATTON WATER COMPANY

Population 1910 census, 3,907; increase since 1900, 1, 256. Estimated 1915, 4,500a

LOCATION

Northern Cambria County; on Chest Creek and Cresson Division of Pennsylvania R. R.

INDUSTRIES

Mining and agriculture: silk mill, clay works, brewery.

WATER SUPPLY

Patton Water Co., incorporated 1893 for Patton Borough.

SOURCE AND COLLECTION

Water pumped from intake in Chest Creek, just above borough, to 1,000,000 gallon distributing reservoir on hill at east about 300 feet above borough. Pumping plant capacity 2,000,000 gallons per day. Equipment as follows: Two Worthington compound duplex 1,500,000 gallon pumps, one McGowan 500,000 gallon pump and two Erie City 80 hp. boilers. Water soft.

DISTRIBUTION

By gravity through 8.46 miles of main as follows:

Size (inches),	8	6	4	3	2	1	Total
Length (miles),	1.00	0.50	3.60	0.45	2.90	0.01	8.46
Per cent.,	(18)		(48)		(34)		100

Pressures 80 to 100 pounds; 30 fire hydrants, 4-inch.

CONSUMPTION

About 4,200 persons supplied exclusive of industrial plants; 500 taps, 10 industrial. Average daily consumption, determined by pump displacement, 700,000 gallons; maximum 750,000 gallons, 30% domestic; 27 taps metered, 10 industrial.

PENFIELD, HUSTON TOWNSHIP, CLEARFIELD COUNTY

PENFIELD WATER COMPANY (Unincorporated)

Estimated 1915 population, 600.

LOCATION

Northwestern Clearfield County, on Wilson Run, tributary of Sinnemahoning Creek; along Allegheny Division of Pennsylvania R. R. and Buffalo & Susquehanna R. R.

INDUSTRIES

Mining and agriculture.

WATER SUPPLY

Since 1905 by Penfield Water Co., a partnership.

SOURCE AND COLLECTION

Small intake on Wilson Run, 2 miles northwest of village; watershed area 4 square miles; and 31,500 gallon storage reservoir, 0.5 mile above intake, at elevation 120 feet above village. Water soft.

Penfield mineral spring; waters formerly bottled and shipped, now used only for drinking purposes in village during summer.

Many other springs in vicinity of village; one supplies boilers of Penfield Coal Co.

DISTRIBUTION

By gravity through 3.5 miles of mains, as follows:

Size (inches),	6	4	1¼	Total
Length (miles),	2.5	0.5	0.5	3.5

Pressures about 50 pounds; 5 fire hydrants, 4-inch.

CONSUMPTION

About 320 persons supplied; 90 taps. Average daily consumption about 39,200 gallons; 20,000 gallons for locomotives; about 47% domestic and 53% industrial; 90 houses connected up, but only 60 using water.

The Pennsylvania and Buffalo & Susquehanna railroads each has 50,000 gallon water tanks near station, supplied by Penfield Water Co. During drought of 1908 the two railroads used Penfield as main source of supply, watering as many as 29 locomotives per day.

INDUSTRIAL

Penfield Coal & Coke Co. obtains mine supply from flowing well; 600 feet of 3-inch pipe leads to tank near boiler house, thence water pumped to boilers. Mineral water, medium hard, also used for drinking purposes by employees.

PHILIPSBURG, SOUTH PHILIPSBURG AND RUSH TOWNSHIP, CENTRE COUNTY; CHESTER HILL BOROUGH, MORRIS AND DECATUR TOWNSHIPS, CLEARFIELD COUNTY

CITIZENS WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915	Supplied
Philipsburg,	3,585	319	4,000	4,000
South Philipsburg,	434	63	435	400
Rush Twp.,				400
Chester Hill,	648	62	650	400
Morris Twp.,				600
Decatur Twp.,				400

LOCATION

Territory in southwestern Centre and southeastern Clearfield counties, on both sides of Moshannon Creek, a tributary of West Branch of Susquehanna River; traversed by Tyrone Division of Pennsylvania R. R., New York Central & Hudson River R. R. and Pittsburgh & Susquehanna R. R.

INDUSTRIES

Foundry, shirt factory and brick works, mining and agriculture.

WATER SUPPLY

Citizens Water Co., incorporated 1904, operates in territory around Philipsburg in Centre and Clearfield counties through charters of five controlled companies, as follows:

Name	Inc.	Incorporated for
Citizens W. Co.,	1904	Philipsburg Boro.
Home W. Co. of South Philipsburg, Centre County,	1901	South Philipsburg
Peoples W. Co. of Rush Twp., Centre County,	1901	Rush Twp.
The Cold Spring W. Co.,	1901	Chester Hill Boro., Clearfield County
Morris W. Co.,	1903	Morris Twp., Clearfield County
Decatur W. Co.,	1901	Decatur Twp., Clearfield County

SOURCE AND COLLECTION

(1) Intake on Cold Stream Creek 4 miles south of borough. Water by gravity to 250,000 gallon reservoir nearby through 1,000 feet of 18-inch pipe line; springs in neighborhood feed reservoir from

east through 4-inch pipes. Watershed area about 10 square miles. Daily yield estimated at 2,000,000 gallons. Water soft.

(2) Originally from Cold Stream Creek, just outside borough limits; pumped from impounding reservoir to distributing reservoir on hill east of borough; on account of pollution used only as reserve in emergency.

PHILIPSBURG BOROUGH

DISTRIBUTION

By gravity through 4 miles of 16-inch main to borough limits. By 16-inch direct connection from intake to 16-inch main, reservoir is by-passed and water taken directly from stream in low water season. Distributing mains as follows:

Size (inches),	16	12	10	8	6	4	3	2	1	Total
Length (miles),	4.0	1.5	0.5	2.5	4.5	6.0	1.5	1.0	1.0	22.5
Per cent.,	(	27	)	11	20	27	(	15	)	100

Forty-nine fire hydrants, 2½-inch.

CONSUMPTION

About 4,000 persons supplied; 806 taps. Consumption estimated 978,000 gallon per day, 60% domestic and 40% industrial.

DISTRICT OUTSIDE OF PHILIPSBURG BOROUGH

SOURCE AND COLLECTION

Supply received through connections with supply main from before-mentioned 250,000 gallon distributing reservoir.

DISTRIBUTION

By gravity through 12.5 miles of mains. Following table lists principal features of distributing system:

Place	Length of mains (miles)	Principal sizes (inches)	Pressures (pounds)	Fire hydrants	
				Number	Size (inches)
South Philipsburg,	1.9	4	40 to 50	5	2½
Rush Twp.,	1.5	4 & 2	40 to 50		
Chester Hill Boro.,	3.1	8 & 6	40 to 50	11	2½
Morris Twp.,	4.0	10 & 4	40 to 50		
Decatur Twp.,	2.0	4	45 to 50		
Total,	12.5			16	

CONSUMPTION

Place	Number of people supplied	Number of taps	How measured	Gallons per day		Total
				Domestic	Indus.	
South Philipsburg,	400	85	Estimated	2,000	----------	2,000
Rush Twp.,	400	120	"	3,000	----------	3,000
Chester Hill Boro.,	400	139	"	2,000	----------	2,000
Morris Twp.,	600	119	"	9,000	1,000	10,000
Decatur Twp.,	400	72	"	5,000	----------	5,000
Total,	2,200	535	----------	21,000	1,000	22,000

ST. BENEDICT (CARROLL TWP.), CAMBRIA COUNTY

ST. BENEDICT WATER COMPANY

Estimated population 1915, 1,250a

LOCATION

Northwestern Cambria County, 2 miles east of Spangler, near headwaters Stony Creek; on branch of New York Central & Hudson River R. R.

INDUSTRIES

Principally mining.

WATER SUPPLY

St. Benedict Water Co., incorporated 1907 for Carroll Township.

SOURCE AND COLLECTION

Small tributary of Rock Run fed by six springs north and east of St. Benedict; masonry dam across stream forms 270,000 gallon storage reservoir, located 0.5 mile north of village; watershed area 400 acres, 20% forest covered. Mechanical filter plant, capacity 150,000 gallons per 24 hours, and pumping plant, capacity 5,000 gallons per hour, located 100 feet south of reservoir; water forced through 1,900 feet of 4-inch pipe to distributing reservoir on knoll directly above village.

DISTRIBUTION

By gravity from distributing reservoir through 1.72 miles of pipe, as follows:

Size (inches),	4	3	2	1½	Total
Length (miles),	.36	.95	.28	.13	1.72

Maximum pressure 40 pounds; 50 outside domestic service hydrants.

CONSUMPTION

About 1,000 persons supplied; 50 taps, none metered. Average daily consumption 30,000 gallons, 40,000 maximum and 20,000 minimum. About 18,000 gallons domestic and 12,000 industrial. When plentiful, some sold to New York Central & Hudson River R. R.

SPANGLER BOROUGH, CAMBRIA COUNTY

NORTHERN CAMBRIA WATER COMPANY

Population 1910 census, 2,700; increase since 1900, 1,084. Estimated 1915, 3,000a

LOCATION

Northwestern Cambria County, on West Branch of Susquehanna River; along Cresson Division of Pennsylvania R. R., and New York Central & Hudson River R. R.

INDUSTRIES

Principally mining; some lumbering.

WATER SUPPLY

Northern Cambria Water Co., incorporated 1913 for Susquehanna Township; merger of Barnesboro Water Co. and Spangler Water Co.

SOURCE AND COLLECTION

Brown's Run and Stony Creek; water stored in 20,000,000 gallon reservoir on Brown's Run, 1.5 miles southwest of borough, and in 6,000,000 gallon reservoir on Stony Creek, 2 miles southeast of borough. A 50,000,000 gallon reservoir on Schirp Run, south of borough, contemplated, but no work done on it as yet.

DISTRIBUTION

By gravity through 12-inch supply main from Browns Run reservoir and probably 8-inch main from Stony Creek reservoir. Distributing mains as follows:

Size (inches),	12	8	4	3	Total
Length (miles),	2.18	2.76	0.98	0.34	6.26

Pressures about 90 pounds; 11 fire hydrants, 4-inch.

CONSUMPTION

Estimated population supplied 2,200 through 136 taps, 1 metered. Average daily consumption not known; assuming 40 gallons per capita domestic consumption would be 88,000 gallons. P. R. R. supplied with 44,000 gallons daily; N. Y. C. & H. R. R. probably with 33,000 gallons.

HISTORICAL

Northern Cambria Water Co., a merger of Spangler Water Co., incorporated 1892 for Spangler Village, water being obtained from reservoir on Stony Creek, and Barnesboro Water Co., incorporated 1899 for Barnesboro Borough and adjacent territory, purchasing supply from Spangler Water Co.

The Marjorie Water Co. was incorporated 1902 for Susquehanna Township, its stock being owned by stockholders of Spangler and Barnesboro Water companies. It completed 20,000,000 gallon reservoir on Browns Run in 1910. Charter allowed to lapse, and Northern Cambria Water Co., a reorganization of Marjorie Water Co., was incorporated in 1909 to supply Susquehanna Township.

Northern Cambria Water Co., incorporated 1913 as merger of Northern Cambria Water Co., Spangler Water Co. and Barnesboro Water Co. October 1, 1913, all pipe lines and property of company in Barnesboro sold to borough of Barnesboro.

TYLER VILLAGE (HUSTON TWP.), CLEARFIELD COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 1,500

LOCATION

Northeastern Clearfield County, on Bennett Branch Sinnemahoning Creek; along Pennsylvania R. R. and Buffalo & Susquehanna R. R.

INDUSTRIES

Coal mining, agriculture.

WATER SUPPLY

Cascade Coal & Coke Co., supplies its own operations and the village.

SOURCE AND COLLECTION

Water from springs rising on hillside short distance southeast of village collected into 200,000 gallon reservoir. During summer months flow from springs slight and supply obtained by hand pumping from wells. Spring water soft; well water slightly hard.

DISTRIBUTION

By gravity through 0.8 miles 3-inch mains; pressures 40 to 50 pounds; 11 fire hydrants, 2½-inch.

CONSUMPTION

Supply to 1,300 persons; 10 taps and outside hydrants. Stated average daily consumption 7,000 gallons, all domestic. No means of measurement.

INDUSTRIAL SUPPLY

Water from 1,750,000 gallon reservoir (the upper of three, the others at present discontinued) on Bennett Run, 1 mile above village, flows through 8-inch line to Cascade Coal & Coke Co.'s plant, joined by 6-inch line, which formerly led into lower reservoir. All lines connected up with pumping station on Bennett Branch of Sinnemahoning Creek near mouth of Bennett Run. During summer, when Bennett Run is dry, industrial supply pumped from Bennett Branch through distributing mains to reservoir on hill, whence it flows by gravity back to plant. Water from Bennett Run very soft; water from Bennett Branch impregnated with sulphur from mine drainage.

Pumping station installation: 650,000 gallon two-stage Worthington centrifugal pump, 220,000 gallon two-stage Worthington centrifugal pump, six Babcock & Wilcox "Cahall" water tube boilers, total hp. 1,208.

Supply and distributing mains: 1.2 miles 8-inch reservoir to pumping station, 0.3 miles 6-inch to pumping station and washer, 1.2 miles 4-inch to ovens.

Pressures 40 to 50 pounds. Daily consumption in gallons as measured by pump displacement: For boilers, 100,000; for washers, 350,000; for coke ovens, 170,000; total, 620,000; maximum, 720,000.

WINBURNE, LANSE AND KYLERTOWN (COOPER TWP.) AND MUNSON (MORRIS TWP.), CLEARFIELD COUNTY

WINBURNE WATER COMPANY

BLACK BEAR WATER COMPANY

Estimated 1915 population: Winburne, 2,030; Munson, 300; Lanse, 600; Kylertown, 400.

LOCATION

Winburne midway along eastern boundary of Clearfield County, on west bank Moshannon Creek; along New York Central & Hudson River R. R. Munson 1.5 miles southwest of Winburne; Lanse 1.5 miles northeast, and Kylertown 2.5 miles northwest of it. Mining district.

WATER SUPPLY

(1) Winburne Water Co., incorporated 1903 for Cooper Township; supplies Winburne, Lanse and Kylertown.

(2) Black Bear Water Co., incorporated 1907 for Morris Township, subsidiary of Winburne Water Co., supplies Munson.

SOURCE AND COLLECTION

Black Bear Run, Centre County, 5 miles southeast of Winburne; water impounded in 780,000 gallon reservoir covering 3.5 acres; watershed area about 3.1 square miles. Small distributing reservoir on hill near Kylertown; water pumped to reservoir by Blake double action steam pump (to be replaced by a triplex 115,000 gallon pump driven by a 5 hp. electric motor). Flow of Black Bear Run averages 3,640,000 gallons per day, by weir measurement. Water soft.

DISTRIBUTION

By gravity through 13.25 miles of mains as follows:

Size (inches),	10	8	6	4	2	Total
Length (miles),	4	1	0.25	6	2	13.25
Per cent.,	30	(9	)	46	15	100

From reservoir to Winburne, distance of 4 miles, 10-inch main, reduced to 8-inch, for 1 mile to center of village, and there reduced to 6-inch and 4-inch; laterals 2-inch. From Winburne a 4-inch main 1.5

miles to Lanse; thence an additional 2.5 miles to Kylertown; 4-inch main 1.5 miles from Winburne to Munson. Pressures in pounds as follows: Winburne 90 to 95, Lanse 65, Kylertown 35, Munson 60. Eleven fire hydrants, 6-inch, all in Winburne.

CONSUMPTION

About 3,150 persons supplied; 516 taps, as follows:

	Winburne	Kylertown	Lanse	Munson	Total
Taps,	265	44	67	140	516
Estimated number supplied,	1,825	320	480	525	3,150

Consumption not known; allowing 30 gallons per capita, domestic consumption would be 94,500 gallons.

Industrial consumption in gallons per day as follows:

	Average	Maximum
Peale, Peacock & Kerr Plant No. 1,	13,300	19,800
Peale, Peacock & Kerr Plant No. 9,	10,000	16,400
Pennsylvania Coal and Coke Corp.,	32,900	43,700
Clearfield Bituminous Coal Corp.,	1,400	1,600
Irish Bros.,	11,600	14,300
Ashman Coal Co.,	16,400	20,600
Total,	85,600	116,400

There are 7 taps metered, industrial.

SECTION No. 7

SUSQUEHANNA RIVER

MIDDLE WEST BRANCH SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

Table of Industrial Water Supplies (Coal Companies)

SECTION No. 7

SUSQUEHANNA RIVER—MIDDLE WEST BRANCH SUB-BASIN.

GENERAL DESCRIPTION

LOCATION AND EXTENT

The Middle West Branch Sub-basin of the Susquehanna River lies in the northern central part of Pennsylvania, east of the Upper West Branch and west of the Lower West Branch and Middle Main Susquehanna sub-basins. It comprises an area of about 2,514 square miles, or 5.6% of the area of the State, and covers the territory drained by the West Branch below the mouth of Sinnemahoning Creek, in western Clinton County, and above the mouth of Pine Creek, on the Lycoming County line. Pine Creek watershed is included; also the greater part of Clinton and Centre counties, with large parts of Potter, Tioga and Lycoming counties, and a small portion of Cameron County.

SURFACE CHARACTERISTICS

The surface of the section south of the West Branch consists of high parallel ranges of mountains, between which are fertile valleys from 5 to 15 miles in width. The northern part, which lies in the Allegheny plateau, is rough and mountainous, with deep and narrow valleys. The terminal moraine crosses this area parallel and close to the northern border in Potter and Tioga counties. The most important tributaries are Kettle, Bald Eagle and Pine creeks.

POPULATION

The population is small and scattered, aggregating nearly 82,000 in 1910, the most densely populated section lying along the West Branch near Lock Haven. Only five boroughs have more than 2,500 population, and of the total the urban population is 29%. The district averages approximately 32 persons per square mile and, with one exception, is the least densely populated section in the State.

RESOURCES AND INDUSTRIES

The chief mineral resources of this area are large deposits of bituminous coal in the hilltops of the Allegheny plateaus, with fire

clay, limestone and a little iron ore. The principal industries are mining, lumbering, farming, quarrying and small manufacturing establishments in the larger places.

WATER SUPPLY

The quantity of water is generally sufficient, although shortages due probably to insufficient storage works have been experienced in the region about State College. The quality is also generally good, but the waters from the limestone regions of Centre County are hard. The section is one of the few in which domestic consumption approximates industrial. The bulk of the supply is obtained under the gravity system, indicating a preferential use of soft waters from the hills.

There are 25 public supplies in the section, of which eight are municipal. The latter class includes Lock Haven, Renovo and Bellefonte, with an aggregate consumption of 4,500,000 gallons per day, or 56% of the total public consumption. The total population served by water systems is about 40,000. Two systems that supply more than one community are the Chatham Water Co. and the West End Water Co. The former supplies the borough of Avis and vicinity, in Clinton County, and the second the borough of Mill Hall, and neighboring communities.

A total consumption of over 4,400,000 gallons is reported by the railroads, the New York Central and Pennsylvania lines being the chief users with approximately equal amounts. The coal companies report the small total of 48,000 gallons per day. Other industries consume nearly 1,400,000, the Nittany Iron Co., at Bellefonte, and the Elk Tanning Co., at Galeton and Leetonia, using nearly all of this amount.

The following tables give a summary of the water supplies in this section, both domestic and industrial, after which are detailed descriptions of the water supply systems arranged alphabetically according to places supplied:

OPERATING PUBLIC WATER SUPPLIES, SECTION No. 7

Place	County	Ownership or control	Population 1915	Population Supplied	City Company	City Municipal	Borough Company	Borough Municipal	Borough Private	Village Company	Village Private
Avis,	Clinton,	Chatham W. Co.,	1,700	1,100			1				
Carlton,	Clinton, Pine Creek Twp.,									—	
Woolrich,	Clinton, Pine Creek Twp.,									—	
Bellefonte,	Centre,	Municipal,	4,150	4,150				1			
Boalsburg,	Centre, Harris Twp.,	Boalsburg W. Co.,	350	300						1	
Booneville,	Clinton, Logan Twp.,	Booneville W. Co., uninc.,	80	65							1
Cross Forks,	Potter, Stewardson Twp.,	The Cross Fork W. Co.,	1,200							1	
		Private,		375							1
Farwell,	Clinton, Chapman Twp.,	Private, Absalom Farwell,	500	125							1
Galeton,	Potter,	Galeton-Eldred W. Co.,	5,200	5,000			1				
Greenburr,	Clinton, Logan Twp.,	Greenburr W. Co.,	150	125						1	
Howard,	Centre,	Municipal,	720	700				1			
Lock Haven,	Clinton,	Municipal,	8,000	8,000		1					
Castanea,	Clinton,		175b							—	
Flemington,	Clinton,			200							
Loganton,	Clinton,	Municipal,	400	390				1			
Milesburg,	Centre,	Municipal,	530	530				1			
Mill Hall,	Clinton,	West End W. Co. (David Gring and others).	4,050	3,822			1				
Allison Twp. (part),	Clinton,									—	
Bald Eagle Twp. (part)	Clinton,									—	
Castanea,	Clinton, Castanea Twp.,									—	
Dunsburg,	Clinton, Woodward Twp.,									—	
Flemington,	Clinton,						—				
Lockport,	Clinton, Woodward Twp.,									—	
Salona,	Clinton, Lamar Twp.,									—	
Pine Grove Mills,	Centre, Ferguson Twp.,	Pine Grove W. Co.,	325	300						1	
Pleasant Gap,	Centre, Spring Twp.,	Pleasant Gap W. S. Co.,	700	400						1	
Port Matilda,	Centre, Worth Twp.,	Port Matilda W. Co.,	400	300						1	
Renovo,	Clinton,	Municipal,	5,000	5,000				1			
Snow Shoe,	Centre,	Snow Shoe W. Co.,	900	790			1				
South Renovo,	Clinton,	Municipal,	1,050	1,100				1			

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 7—Continued

Places	County	Ownership or control	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
State College,	Centre,	University W. Co., Campus W. Co.	4,000	2,150	------	------	1	------	------	------	------
		State College W. Co.,		1,850	------	------	1	------	------	------	------
Tylerville,	Clinton, Logan Twp.,	Tylerville W. S. Co.,	200	200	------	------	------	------	------	1	------
Unionville,	Centre,	Municipal,	390	150	------	------	------	1	------	------	------
Wellsboro,	Tioga,	Wellsboro W. Co.,	3,200	2,500	------	------	1	------	------	------	------
Western Penitentiary,	Centre,	Private,	(2,500)	(2,500)	------	------	------	------	------	------	------

bEstimated by Water Supply Commission.

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 7—*Continued*

Place	County	Ownership or control	Supply: Source: Surf.	Supply: Source: Ground	Supply: Source: Comb.	Supply: System: Grav.	Supply: System: Pumped	Supply: System: Comb.	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Avis,	Clinton,	Chatham W. Co.,	1	---	---	1	---	---	----------	----------	55,000b	------
Carlton,	Clinton, Pine Creek Twp.,											
Woolrich,	Clinton, Pine Creek Twp.,											
Bellefonte,	Centre,	Municipal,	---	1	---	---	1	---	900,000a	600,000a	1,500,000a	------
Boalsburg,	Centre, Harris Twp.,	Boalsburg W. Co.,	1	---	---	1	---	---	----------	----------	9,000b	------
Booneville,	Clinton, Logan Twp.,	Booneville W. Co., unINC.,	---	1	---	1	---	---	----------	----------	2,000b	------
Cross Forks,	Potter, Stewardson Twp.,	The Cross Fork W. Co.,	1	---	---	1	---	---	----------	----------	----------	------
		Private,	---	1	---	1	---	---	----------	----------	15,000b	------
Farwell,	Clinton, Chapman Twp.,	Private, Absalom Farwell,	---	1	---	1	---	---	1,000a	----------	1,000a	------
Galeton,	Potter,	Galeton-Eldred W. Co.,	---	---	1	---	---	1	650,000	----------	650,000	130d
Greenburr,	Clinton, Logan Twp.,	Greenburr W. Co.,	1	---	---	1	---	---	----------	----------	3,750b	------
Howard,	Centre,	Municipal,	1	---	---	1	---	---	9,700a	1,100a	10,800a	------
Lock Haven,	Clinton,	Municipal,	1	---	---	1	---	---	----------	----------	2,000,000a	------
Castanea,	Clinton,											
Flemington,	Clinton,											
Loganton,	Clinton,	Municipal,	---	1	---	1	---	---	----------	----------	3,200a	------
Milesburg,	Centre,	Municipal,	1	---	---	1	---	---	----------	----------	21,200b	------
Mill Hall,	Clinton,	West End W. Co. (David Gring and others).	1	---	---	1	---	---	300,000a	600,000a	900,000a	------
Allison Twp. (part),	Clinton,											
Bald Eagle Twp. (part)	Clinton,											
Castanea,	Clinton, Castanea Twp.,											
Dunsburg,	Clinton, Woodward Twp.,											
Flemington,	Clinton,											
Lockport,	Clinton, Woodward Twp.,											
Salona,	Clinton, Lamar Twp.,											
Pine Grove Mills,	Centre, Ferguson Twp.,	Pine Grove W. Co.,	---	1	---	1	---	---	11,750b	250b	12,000b	------
Pleasant Gap,	Centre, Spring Twp.,	Pleasant Gap W. S. Co.,	---	1	---	1	---	---	10,000b	30,000b	40,000b	------
Port Matilda,	Centre, Worth Twp.,	Port Matilda W. Co.,	---	1	---	1	---	---	2,000a	----------	2,000a	------
Renovo,	Clinton,	Municipal,	1	---	---	1	---	---	986,000	14,000	1,000,000	200t
Snow Shoe,	Centre,	Snow Shoe W. Co.,	---	1	---	1	---	---	150,000a	50,000a	200,000a	------
South Renovo,	Clinton,	Municipal,	---	---	1	1	---	---	----------	----------	44,000b	------

Place	County	Ownership or control	Supply						Consumption (average daily)			
			Source			System						
			Surf.	Ground	Comb.	Grav.	Pumped	Comb.	Domestic (gals.)	Industrial (gals.)	Total (gals.)	Per capita (gals.)
State College,	Centre,	University W. Co., Campus W. Co.	---	1	---	---	---	1			150,000	70t
		State College W. Co.,	1	---	---	1	---	---			400,000a	------
Tylerville,	Clinton, Logan Twp.,	Tylerville W. S. Co.,	---	1	---	1	---	---	1,500a		1,500a	------
Unionville,	Centre,	Municipal,	---	1	---	1	---	---	6,000b		6,000b	------
Wellsboro,	Tioga,	Wellsboro W. Co.,	---	---	1	---	---	1	225,000a	25,000	250,000a	------
Western Penitentiary,	Centre,	Private,	---	---	---	---	---	---			800,000a	------

aEstimated by water companies.
bEstimated by Water Supply Commission.
dDomestic.
tTotal.

RAILROAD WATER SUPPLIES, SECTION NO. 7

BUFFALO & SUSQUEHANNA

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Brookland W. Sta.,	Creek,	4-inch gravity,		
	Spring,	3-inch gravity,	100,000	
Gaines W. Sta.,	Creek,	4-inch gravity,	16,000	
Ansonia W. Sta.,	Creek,	2-inch gravity,	4,000	
Burrows,	Creek,	3-inch gravity,	60,000	
Van Housen W. Sta.,	Springs,	2-inch pipe line,	24,000	
Galeton W. Sta.,	Creek,	4-inch pipe pumped by shops,	240,000	
Galeton Shops,	Creek,	Pumped 6-inch suc. & 4-inch dis. 8-inch suc. & 6-inch disc.,	10,000	
	Spring,	2-inch gravity,	100	
	City line,	1-inch pipe,		50
Galeton Office Bldg. & Depot,	Spring,	1-inch line,	10,000	10,000
	City line,	1-inch pipe,		
Galeton Freight Office,	City,	1-inch line,		6,000

BELLEFONTE CENTRAL

Coleville,	Buffalo Run,	Pumped,	32,000	
Waddles,	Spring,	Gravity,	15,000	
State College,	State College Supply,			9,000

ERIE

Landrus,		Gravity,	10,000	

RAILROAD WATER SUPPLIES, SECTION NO. 7—Continued

NEW YORK CENTRAL AND HUDSON RIVER

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Wellsboro Jct.,	Baldwin Run,	6-inch grav. conc. dam 13x20,		
	1 8-inch 200 ft. well,	2 pumps, 7x6x10, 6x5¾x6,	250,000	
Darling Run,	Darling Run,	6-inch grav. w. strainer,	60,000	
Tiadaghton,	Cammal Run,	Dam 5x50 ft. with 12-inch grav. pump 6x5¾x6,	200,000	
Blackwell,	Buttermilk Falls,	6-inch grav. w. strainer pump 10x6x12,	120,000	
Cedar Run,	Jacobs Run,	6-inch grav. w. strainer pump 7x6x10,	100,000	
Cammal,	Mill Run,	6-inch grav. w. strainer,	21,000	
Jersey Mills,	Callahan Run,	6-inch grav. w. strainer, 2 pumps 7½x7½x10,	230,000	
Ramsey Run,	Ramsey Run,	3 ft. x 25 ft. dam 6-inch grav.,	90,000	
Wellsboro,	Charleston Run,	Pump 6x5¾x6. 3-inch grav. w. strainer,	30,000	
Brownlee,	Spring,	3-inch grav. w. strainer,	9,700	
Antrim,	Antrim W. Co.,	4-inch main,		10,000
Avis,	Jersey Shore W. Co.,	8-inch main,		820,000
Youngdale,	McElhattan Run,	6-inch grav. w. strainer,	50,000	
Beech Creek,	Canoe Run,	3-inch grav. w. strainer pump 6x5¾x6,	43,000	
Salt Lick,	Salt Lick Run,	Dam 6 ft. x 50 ft. 10-inch grav.,	60,000	
Cato,	Wolf Run,	Dam 3 ft. x 30 ft. 6-inch grav.,	60,000	
Stark,	Big Spring,	6-inch grav. w. strainer pump 5½x3½x5,	51,000	

PENNSYLVANIA

North Bend,	Springs,	Gravity from res.,	80,000	
Ferney,	Spring,	Gravity from res.,	120,000	
Lock Haven,	City main,			3,000
Lock Haven Shops,				175,000
Aughanbaugh,	Spring,	Gravity from res.,	30,000	
Oak Hall,	Run,	Gravity,	8,000	
Drurys Run,	Creek,	Gravity,	42,000	
Renovo,	Susq. River,	Pumped,	276,000	
Renovo,	Creek,	Gravity,	481,000	
Bellefonte,	Borough,			20,000
Holters,	Small Run,	Gravity,	25,000	
Port Matilda,	Spring,	Gravity,	36,000	
Mill Hall,	Fishing Creek,	Pumped,	140,000	

Rhoads,	Spring,	Gravity,	10,000	
Snow Shoe Int.,	Bald Eagle Creek,	Pumped,	80,000	
	Wallace Run,	Gravity,	80,000	
	Snow Shoe W. Co.,			20,000

WHITE DEER & LOGANTON

Greens Gap Run,	Br. of Fishing Creek,	Gravity,	2,000	
Loganton,	Br. of Fishing Creek,	Gravity,	2,000	

CENTRAL RAILROAD OF PENNSYLVANIA

Bellefonte,	Spring Creek,	Pumped,	10,000	
Hecla Park,	Mountain stream,	Gravity,	16,000	
Mill Hall,	Mountain stream,	Gravity,	8,000	

LEETONIA RAILWAY

Station A,	Spring,	Gravity,	1,500	
Station B,	Spring,	Gravity,	1,500	
Station C,	Spring,	Gravity,	1,500	
Station D,	Spring Run,	Gravity,	1,500	
Leetonia,	Cedar Run,	Gravity,	3,000	
Totals,			3,350,800	1,073,050

INDUSTRIAL WATER SUPPLIES, SECTION NO. 7 (MISCELLANEOUS COMPANIES)

Does not Include All the Smaller Companies

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product	Returned to stream (%)	Increase in Temp. °F.
				Domestic	Industrial			
Aughanbaugh, Clinton county	Susquehanna Stone Co.,	Silver stream,	Gravity,		6,000	250 tons		
Bellefonte, Centre county,	Nittany Iron Co.,	Spring,	Pumped,		650,000			
	American Water Supply Co. (lime kilns)	Fullers Run,	Gravity,		5,000			
English Center, Lycoming county	Elk Tanning Co. (operations abandoned)	Spring Creek,	(Emergency)					
		Little Pine Creek and 2 wells	Pumped,	1,000b	(200,000)			
		Spring,	Gravity,	(4 fam.)				
Farrandsville, Clinton county	Harbison-Walker Refractories Co.	Lick Run,	Gravity,		15,000	77 tons	60	to 110
Galeton, Potter county,	Elk Tanning Co.,	West Br. Creek,	Pumped,		350,000			
		Galeton W. Co.,						
Hoytville, Tioga county,	Elk Tanning Co. (operations suspended)	Babb Creek,	Gravity,		(250,000)			
		Love Spring and Springs,	Gravity,	700b (6 fam.)				
Leetonia, Tioga county,	Elk Tanning Co., (For more complete description see Leetonia)	Cedar Run,	Pumped & gravity,					
		Drilled well,	Pumped,		300,000			
		Spring,	Gravity,	12,000b (400 pop.)				
Lock Haven, Clinton county,	Kestler, Lesh & Co., Tannery	Susquehanna River,	Pumped,		50,000			
Manhattan, Tioga county,	Elk Tanning Co. (operations suspended)	Shin Hollow Run and drilled well	Pumped,		(350,000)			
		Spring,	Gravity,	2,400b (120 pop.)				
Mill Hall, Clinton county,	Harbison-Walker Refractories Co.	West End Water Co.,			(18,000)	91 tons	60	to 110
	Harbison-Walker (American Works)	West End Water Co.,			(15,000)	77 tons	60	to 110

Monument, Centre county,	Harbison-Walker Refractories Co.	Monument Run,	Gravity,		18,000	87 tons	60	to 110
Total from private systems,				16,100	1,394,000			

INDUSTRIAL WATER SUPPLIES, SECTION NO. 7 (COAL MINING COMPANIES)

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
Centre county, Cherry Run,	Kelly Bros. Coal Co.,	Pond,	Gravity,		s 550	458	1
Clinton county, Bitumen,	Kettle Creek Coal Mfg. Co.,	Cooks Run,	Pumped,		s 3,000	1,090	4
Tioga county, Antrim,	Fall Brook Coal Co.,	Springs,	60,000 gallon reservoir, gravity	43,000 (1,200 pop.)	s 1,200	887	1
		Well (Aux.),	Pumped				
	(For more complete description see Antrim)						
Total from private systems,				43,000	4,750		

AVIS BOROUGH AND VICINITY, CLINTON COUNTY

CHATHAM WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Avis,	796	Inc. 1908	1,200
Carlton, Pine Creek Twp.,			200
Woolrich, Pine Creek Twp.,			300

LOCATION

Avis, in eastern Clinton County, along New York Central & Hudson River R. R.; Carlton 2.25 miles northwest, and Woolrich, 3.75 miles northwest of Avis.

INDUSTRIES

At Avis are car and repair shops; at Woolrich a woolen mill.

WATER SUPPLY

Chatham Water Co., incorporated 1901 for Avis Borough (Oak Grove), Clinton County.

SOURCE AND COLLECTION

Chatham Run, about 1 mile northwest of Woolrich; masonry dam 12 feet high impounds 800,000 gallons; tributary watershed area 10 square miles. Water soft.

DISTRIBUTION

By gravity through 12-inch main to near Woolrich, where it reduces to 8-inch, supplying Woolrich, Carlton and Avis. Total length of mains 13.5 miles, as follows:

	Supply		Distributing				
Size (inches),	12	8	8	6	4	3 to 1¼	Total
Length (miles),	2.4	2.4	1.2	3.7	2.1	1.7	13.5
Per cent.,	(36)		(36)		(28)		100

Pressures in Woolrich 55, Carlton 120 and Avis 130 pounds; 21 fire hydrants, 2½-inch.

CONSUMPTION

About 1,100 people supplied; 280 taps, as follows:

	Avis	Woolrich	Cariton	Total
Supplied,	850	200	50	1,100
Taps,	228	42	10	280

At Woolrich one tap supplies woolen mill and operates 12-inch 15 hp. turbine.

Total consumption not known; on basis of 50 gallons per capita, would be 55,000 gallons per day, about 20,000 gallons industrial.

PROPOSED

Permit was granted by Department of Health October 7, 1914, for extension of water works on Chatham Run.

ANTRIM (DUNCAN TWP.), TIOGA COUNTY.

PRIVATE SUPPLY

Estimated 1915 population, 1,200

LOCATION

Southern Tioga County, on Wilson Creek, tributary of Babbs Creek about 13 miles south of Wellsboro; on a branch of New York Central & Hudson River R. R. Built-up portion near summit of mountain.

INDUSTRIES

Mine of Fall Brook Coal Co.

WATER SUPPLY

Private system of Fall Brook Coal Co., installed in 1887.

SOURCE AND COLLECTION

Two spring runs 1.5 miles north of village, at headwaters of Sand Run, entering just above mine. Eastern intake dam 0.5 mile from springs; western intake 500 feet below springs has 2-inch gravity

line joining 3-inch gravity line, 1,800 feet long, from eastern intake, and continuing as 3-inch 1 mile to 57,000 gallon distributing reservoir, on high ground at north end of village.

For use as auxiliary supply in dry season water from 6-inch drilled well 90 feet deep near eastern intake is pumped to intake by 40 g. p. m. Deming deep well pump, belt-connected to Olds gas engine. Water soft.

DISTRIBUTION

By gravity through 1 mile of 2-inch lines to separate parts of system; pressures 20 to 40 pounds; 2 fire hydrants.

CONSUMPTION

Supply to 1,200 people; 3 taps and 28 street hydrants. Average daily consumption, estimated from flow at intake, 44,200 gallons, 97% domestic and 3% industrial.

BELLEFONTE BOROUGH, CENTRE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 4,145; decrease since 1900, 71. Estimated 1915, 4,150.

LOCATION

County seat in central Centre County, on Logan Branch of Bald Eagle Creek, at junction of Spring Creek, Buffalo Run and another small tributary at base of Bald Eagle Mountains; on Tyrone Division of Pennsylvania R. R., Bellefonte Central R. R. and Central R. R. of Pennsylvania. In hilly territory; range in elevation about 200 feet.

INDUSTRIES

Iron furnaces, foundries, limestone quarries and kilns, planing mill and match factory.

WATER SUPPLY

From municipal water works.

SOURCE AND COLLECTION

Large limestone spring in western part of borough; surrounded by masonry wall forming small basin, adjacent to which is main pumping station. Yield of spring 20,000,000 gallons per day, practically steady flow; one of largest in country.

DISTRIBUTION

By pumping from two stations, both operated by water power. Main station operated by power from overflow of spring; contains 8 hp. turbine 35-inch diameter, operated under head of 7 feet. This turbine operates a pump of 173,000 gallons daily capacity. Station also contains Worthington pump, 1,750,000 gallons estimated capacity, and Knowles pump, 30 years old, about 900,000 gallons estimated capacity. These three pumps receive water from spring through 12-inch suction and pump directly into distributing system, excess backing up into 350,000 gallon reservoir, 0.33 mile south of spring, at elevation 196 feet above same.

Second pumping station, on Logans Branch, 500 feet south of spring. Installation, 3-inch turbine of 91 hp., under 13 feet head, operating 1,750,000 gallon pump, taking water from spring through 12-inch suction and discharging through 12-inch main into system. Distributing reservoir connected to system by 12-inch main. Pressures 17 to 85 pounds, according to elevation. The match factory has a private pumping plant, taking water from spring. The borough system is connected to this plant for additional fire pressure when needed. Distributing mains as follows:

Size (inches),	12	10	6	4	3	2	1½	Total
Length (miles),	0.93	0.13	3.25	1.31	0.08	0.26	0.17	6.13
Per cent.,	(	17)	53	21	(	9	)	100

Sixty fire hydrants, 4-inch.

CONSUMPTION

Average daily consumption approximately 1,500,000 gallons, about 40% industrial; largest industrial users Pennsylvania R. R., steam and electric plants. Practically entire population supplied, including about 25 families outside borough limits, in Coleville; 1,200 taps.

COST AND REVENUE

Total cost of works not available. Outstanding bond issue, about $90,000; annual operating expenses, about $9,000; gross revenue, from $10,000 to $11,000 per annum.

Water system in charge of a superintendent, but no regular force for keeping records; accordingly above data are only approximations.

BOALSBURG (HARRIS TWP.), CENTRE COUNTY

BOALSBURG WATER COMPANY

Estimated 1915 population, 350

LOCATION

Southern Centre County, at headwaters of Spring Creek. Agricultural district.

WATER SUPPLY

Boalsburg Water Co., incorporated 1902 for Boalsburg; has supplied village since 1900.

SOURCE AND COLLECTION

Small stream rising in mountains south of village; reservoir 0.75 mile south of Boalsburg.

DISTRIBUTION

By gravity through 0.75 mile of 4-inch main, reducing to 3-inch and 2-inch; pressure 150 pounds; supply adequate in dry season.

CONSUMPTION

About 300 persons in village supplied; a few taps along line outside village. Consumption not known; assuming 30 gallons per capita would be 9,000 gallons per day.

BOONEVILLE (LOGAN TWP.), CLINTON COUNTY

BOONEVILLE WATER COMPANY (Unincorporated)

Estimated 1915 population, 80

LOCATION

Southeastern Clinton County, on Big Fishing Creek, tributary of Bald Eagle Creek, about 1.5 miles north of Greenburr. Farming community.

WATER SUPPLY

Booneville Water Co. an unincorporated company, supplying village since 1906.

SOURCE AND COLLECTION

Spring 0.25 mile north of village, on hillside; 4-inch pipe line to 4,000 gallon distributing reservoir. A 2-inch line leads from reservoir to village.

DISTRIBUTION

By gravity through 0.5 mile of mains, principally 2-inch; pressure about 65 pounds.

CONSUMPTION

About 65 people supplied, 35 taps. Consumption not known; allowing 30 gallons per capita, would be 2,000 gallons daily.

CROSS FORK (STEWARDSON TWP.), POTTER COUNTY

CROSS FORK WATER COMPANY (THE)

PRIVATE SUPPLY

Estimated 1915 population, 1,200

LOCATION

Extreme southern Potter County, on Kettle Creek; along Buffalo & Susquehanna R. R. and Oleona R. R.

INDUSTRIES

Lumbering, stave and heading works, kindling wood factory, saw and planing mills.

WATER SUPPLY

(1) The Cross Fork Water Co. incorporated 1894 for Stewardson Township, Potter County. Source of supply, dam on Elk Lick Run, tributary of Cross Fork Creek. Details of system not known.

(2) Eastern part of village, known as Peltztonia, supplied by private system owned by E. Peltz since 1908.

PRIVATE SUPPLY

SOURCE AND COLLECTION

Springs, one 1.5 miles east of borough, 15,000 gallon reservoir, another 0.25 mile beyond; water piped into same reservoir through 3-inch line.

DISTRIBUTION

By gravity through 1.75 miles of 8-inch mains from reservoir to town; distributing mains principally 4-inch. With reservoir full, pressure is 110 pounds.

CONSUMPTION

About 375 persons supplied; 80 taps. Consumption not known; assuming 40 gallons per capita, would be about 15,000 gallons per day.

HISTORICAL

Peltztonia has population of 500, all but four houses in it being owned by E. Peltz. Peltztonia Water Co., incorporated 1901 for supply in Cross Fork, supplied from 1901 to 1908; charter then relinquished by Mr. Peltz, who, owning entire company, took it over as a private company.

FARWELL (CHAPMAN TWP.), CLINTON COUNTY

PRIVATE SUPPLY

Estimated 1915 population 500a

LOCATION

Northern central Clinton County, along north bank of West Branch Susquehanna River, 1.5 miles below Renovo; on Philadelphia & Erie Division, Pennsylvania R. R. Village practically level. Residential suburb of Renovo.

WATER SUPPLY

Private system of Absalom Farwell, installed in 1906.

SOURCE AND COLLECTION

Four springs in northern part of village; water collected and delivered by gravity to 100,000 gallon distributing reservoir, about 50 feet higher than village; watershed area 1.0 square mile. Water soft.

DISTRIBUTION

By gravity through 4-inch main 3,000 feet long; pressures 35 to 45 pounds; no fire hydrants.

CONSUMPTION

About 125 persons supplied; through 25 taps. Stated average daily consumption 1,000 gallons, all domestic. No means of measurement.

FLEMINGTON AND MILL HALL BOROUGHS AND NEIGHBORING VILLAGES, CLINTON COUNTY.

WEST END WATER COMPANY
(David Gring and others)

	Population 1910 census	Increase since 1900	Estimated 1915	Supplied
Flemington,	1,022	158	1,050	1,022a
Mill Hall,	1,043	33	1,200	1,200
Lockport (Woodward Twp.),				800
Dunsburg (Woodward Twp.),				
Castanea (Castanea Twp.),				two industries
Salona (Lamar Twp.) (about to be supplied)				100
Bald Eagle township (part),				50 and several industries
Allison township (part),				200
Total supplied,				3,372

LOCATION

Southern Clinton County, adjacent to Lock Haven, along West Branch of Susquehanna River and its tributary, Bald Eagle Creek; on Pennsylvania and New York Central & Hudson River railroads.

INDUSTRIES

Pulp and paper mill, milk condensery, two brick plants, axe factory, brewery and quarries.

WATER SUPPLY

From West End Water Co., which operates in this territory through charters of following controlled companies:

Company	Inc.	Incorporated for
West End Water Co.,	1904	Allison Township
Crystal Pure Water Co.,	1905	Mill Hall Borough
Bald Eagle Township Water Co.,*	1913	Bald Eagle Township
Castanea Water Co.,*	1913	Castanea Township
Lamar Water Supply Co.,†	1913	Lamar Township
Woodward Township Water Co.,*	1913	Woodward Township
Flemington Water Co.,*	1913	Flemington Borough

*Application pending for purchase by Flemington Water Supply Co.
†Works not as yet built.

West End Water Co. sells water to: (1) Woodward Township Water Co., which partly supplies Castanea Water Co.; (2) Flemington Water Co., which supplies Bald Eagle Township Water Co., latter supplying Crystal Pure Water Co., and balance of supply to Castanea Water Co.

SOURCE AND COLLECTION

Queens Run and three of its tributaries, Rams Hollow, Jerry Hollow and Shingle Hollow runs. On Rams Hollow Run, 3 miles from Susquehanna River, a 3,000,000 to 5,000,000 gallon reservoir, and 0.25 mile below it a 45,000 gallon intake; on Jerry Hollow Run a 30,000 gallon intake; on Queens Run, 2.5 miles below impounding dam on Rams Hollow Run, an intake for emergencies (used only 4 weeks in last 3 years); pumping station containing 500,000 gallon Deane steam pump and 150 hp. boiler. Water from intake on Shingle Hollow Run led to Queens Run intake; discharges into supply mains from other sources. Watershed area 8 square miles, forest covered. Estimated minimum flow from all sources, determined by weir measurement in 1908, stated to be 1,200,000 gallons daily.

Water soft; from sandstone formation.

DELIVERY

From Rams Hollow intake through 12-inch main, enlarging to 14-inch after junction with 8-inch from Jerry Hollow intake. (The 12-inch line continues from Rams Hollow intake to 5,000,000 gallon storage reservoir, can supply direct to distributing system if desired.) From this junction 14-inch main continues to Susquehanna River, en-

larging there to 16-inch, follows along river to a point 0.25 mile northeast of Lock Haven, there branching into one 8-inch and one 16-inch line, the 16-inch continuing to Lockport and Dunsburg.

DISTRIBUTION

By gravity, through a 7 mile system connecting up the several communities. Pressures 70 to 140 pounds. Distributing and supply mains as follows:

Size (inches),	24	16	14	12	10	6	4	less than 4	Total
Length (miles),	1.0	5.0	0.5	3.4	0.7	2.3	0.9	0.5	14.3
Per cent.,	(	69		)	5	16	(	10)	100

Seven fire hydrants, 4-inch.

CONSUMPTION

About 3,150 persons supplied; 270 taps, 5 being metered industrial. Average daily consumption 900,000 gallons, 66% industrial; maximum 1,000,000 gallons; domestic consumption estimated, industrial metered.

GALETON BOROUGH, POTTER COUNTY

GALETON-ELDRED WATER COMPANY

Population 1910 census, 4,027; increase since 1900, 1,612. Estimated 1915, 5,200.

LOCATION

East central boundary Potter County, on Pine Creek; along Buffalo & Susquehanna R. R.

INDUSTRIES

Hub, heading, kindling wood, white goods factories, tannery, hardwood and novelty company, brewery and railroad shops; lumber company.

WATER SUPPLY

Galeton-Eldred Water Co., incorporated 1906 for Galeton, Potter County, and Eldred, McKean County. (Description of latter system in Section No. 16.)

SOURCE AND COLLECTION

(1) Pine Creek and (2) West Branch Creek, impounding surface streams and collecting water from springs; main supply by gravity with emergency pumping supply.

(1) Pine Creek; impounding reservoirs on three tributaries northwest of borough, as follows:

	Falling Spring Run	Johnson Hollow Run	Tom Cabin Run	Total
Distance northwest of center of borough (miles),	2	2.57	3.42	----------
Capacity of reservoir (gals.),	500,000	500,000	700,000	1,700,000
Tributary drainage area (acres),	1,000	1,300	1,500	3,800
Elevation (feet),	1,512	1,574	1,520	----------
Minimum flow by weir measurement (gals. daily),	56,500	46,500	33,500	136,500
Supply main (inches),	6	5	4	----------

Between two upper intakes a spring connected by 2-inch pipe to 4-inch main.

This supply small in comparison with total used by borough. pipes can deliver 500,000 gallons per day; 6-inch main gives pressure of 78 pounds.

(2) West Branch Creek; two intakes and a storage reservoir, about 3 miles west of borough, on tributaries of West Branch of Pine Creek.

	North Branch Wetmore Run	South Branch Wetmore Run	Beech Flat Run
Location,	1 mile above junction of Beech Flat Run & West Branch Intake	1.25 miles above Intake	0.5 mile above junction with West Branch of Pine Creek
Capacities of reservoirs (gals)			700,000
Tributary drainage area (acres),	------	------	1,000
Elevation (feet),	1,577	1,588	1,542
Minimum flow by weir measurement (gals. daily),	357,000	671,000	198,000
Supply main (inches),	8	8	6

About 4,000 feet upstream, on West Branch, near southwest corner of borough, is auxiliary pumping station with 6-inch connection to mains; installed for fire protection only; has not been used for 2 years.

DISTRIBUTION

By gravity except the auxiliary supply No. 2, which is by pumping. Supply and distributing mains as follows:

	Supply mains				Distributing mains			
Size (inches),	10	8	6	4	6	4	2 to ¾	Total
Length (miles),	0.95	1.7	3.3	1.97	6.88	5.35	1.6	15.75
Per cent.,	(17)		(33)		(40)		10	100

Pressures 90 to 100 pounds; 74 fire hydrants, 6-inch.

CONSUMPTION

About 5,000 persons supplied; 619 taps. Stated average daily consumption, determined by weir measurement, 650,000 gallons, all domestic.

HISTORICAL

Borough first supplied about 1895, while an unincorporated village, by Pike Mills Water Co. chartered 1894. In 1906 Pike Mills Water Co., of Potter County, and Eldred Water Co., of McKean County, combined under name of Galeton-Eldred Water Co., supplying boroughs of Galeton, Potter County, and Eldred, McKean County; each borough supplied under its original charter. (Eldred borough supply described under Section No. 16.)

INDUSTRIAL

Elk Tanning Co. obtains supply for tannery partly from West Branch Creek by pumping through one 4-inch, one 5-inch and one 6-inch line, and partly from Galeton Water Co., which furnishes water for fire purposes to six hydrants at pressures of 50 to 80 pounds. Total consumption 350,000 gallons daily.

GREENBURR (LOGAN TWP.), CLINTON COUNTY

GREENBURR WATER COMPANY

Estimated population 1915, 150

LOCATION

Southeastern Clinton County, near county line, 3 miles east northeast of Tylerville. Farming district.

WATER SUPPLY

Greenburr Water Co., chartered 1889 for Greenburr.

SOURCE AND COLLECTION

Kahl's Gap Run, 0.5 mile south of village; small reservoir; watershed area about 1 square mile. Water soft.

DISTRIBUTION

By gravity through 1 mile of mains, principally 3-inch.

CONSUMPTION

About 125 persons supplied; 25 taps. Consumption not known; assuming 30 gallons per capita would be 3,750 gallons daily.

HOWARD BOROUGH, CENTRE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 667; increase since 1900, 104. Estimated 1915, 720a

LOCATION

East central Centre County on Bald Eagle Creek; along Bald Eagle Branch of Pennsylvania R. R.

INDUSTRIES

Canning, handle and mattress factories, brick works and grist mills.

WATER SUPPLY

Municipal works built about 1898.

SOURCE AND COLLECTION

Lick Run, on Muncy Mountain; 1.5 miles south of borough 400,000 gallon reservoir; watershed area about 1,000 acres. Water soft.

DISTRIBUTION

By gravity through 2.5 miles of mains, principally 4-inch and 2-inch; pressures 60 to 67 pounds; 20 fire hydrants, 2-inch.

CONSUMPTION

About 700 persons supplied; 180 taps, one tap for canning factory being outside borough limits. Average daily consumption about 10,800 gallons, 90% domestic and 10% industrial.

COST AND REVENUE

Total cost of works, $8,000; annual operating expenses, $10.00; gross revenue, $500.

LEETONIA (ELK TWP.), TIOGA COUNTY

PRIVATE SUPPLY

Estimated population 1915, 400a

LOCATION

Southwestern corner Tioga County, on Cedar Run, tributary of Babb Creek; on Leetonia R. R. connecting with New York Central & Hudson River R. R.

INDUSTRIES

Lumbering; Cedar Run Tannery of Elk Tanning Co.

WATER SUPPLY

Elk Tanning Co. has small system supplying all company houses and nearly all inhabitants of village.

SOURCE AND COLLECTION

Four springs nearby; one 1 mile southwest in Frying Pan Creek, two 1 mile south on Slide Island Creek, fourth near village.

DISTRIBUTION

By gravity from springs to village through 2-inch pipe line from first spring, 3-inch log pipe line from second two, and 1-inch supply line from last.

CONSUMPTION

About 400 persons supplied. Consumption not known; assuming 30 gallons per capita, would be about 12,000 gallons daily.

INDUSTRIAL SUPPLY

Elk Tanning Co. obtains supply for tannery by gravity and by pumping from Cedar Run and 6-inch drilled well 250 feet deep to 2,000 gallon storage tank. Consumption about 300,000 gallons daily.

LOCK HAVEN CITY, CLINTON COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 7,772; increase since 1,900, 562. Estimated 1915, 8,000a

LOCATION

County seat, southeast of central Clinton County, on south bank of West Branch Susquehanna River and north bank of Bald Eagle Creek just above its junction with former; on Pennsylvania R. R., P. & E. Division, at junction of Bald Eagle Valley Branch. Most of city fairly level, but rises to southwest, in residential section, about 100 feet.

INDUSTRIES

Paper mills, brick works, silk mills, machine shops, foundries, sash and door factory, planing mill, tannery, woven wire works, chain hoist works and cigar factories.

WATER SUPPLY

From municipal works since 1863.

SOURCE AND COLLECTION

McElhattan Creek and Harveys Run, both draining territory on opposite side of Bald Eagle Creek.

McElhattan Creek, principal source, used exclusively about 90% of time. About 5.25 miles due east of city is small crib intake, just below junction of Kammerdine Run; a short distance below is old 2,500,000 gallon reservoir available for emergency use to lower levels of city.

A new 32,000,000 gallon reservoir, with earth dam and concrete wall and spillway 18 feet above stream bed, is under construction about 1,000 feet below intake; watershed area about 15 square miles. Elevation will be 329 feet and 222 feet, respectively, above low and high parts of city.

On Harveys Run, just below junction of Davis Run, about 2.5 miles from city, is 5,000,000 gallon reservoir with earth dam; about 0.25 mile below another 3,000,000 gallon reservoir with earth dam, for emergency use only. Watershed area 4 square miles, covered with second growth timber, all but 500 acres owned by city, or a part of State forest reserve.

During drought of 1908 existing works barely adequate to supply city; estimated daily yield of both sources at that time about 1,300,000 gallons. Water soft.

DISTRIBUTION

By gravity from both sources. From McElhattan Creek 1 mile of 18-inch and 6 miles of 12-inch main to city; old reservoir connected into this by 12-inch pipe. For Harveys Run 12-inch main to city. Pressures 58 to 125 pounds, according to elevation. Distributing mains, exclusive of supply mains, as follows:

Size (inches),	24	12	10	8	6	4	3	2	Total
Length (miles),	0.08	1.34	0.60	0.17	3.50	11.85	0.21	0.52	18.27
Per cent.,	(	12.0		)	19.2	64.8	(	4.0	) 100

Ninety fire hydrants (10 privately owned), 4-inch.

CONSUMPTION

Practically entire population supplied, together with about 200 in Castanea and Flemington, in territory traversed by supply mains from reservoirs.

No attempt to measure consumption accurately, supposed to be about 2,000,000 gallons; per capita figure very high because of lack of restrictions as to use.

COST AND REVENUE

Total cost of works, about $360,000; annual operating expenses, $2,606; interest on bonds and State tax, $5,585; gross annual revenue, $23,396.

INDUSTRIAL

Kistler, Lesh & Co.'s tannery uses about 50,000 gallons per day, pumped from Susquehanna River.

LOGANTOWN BOROUGH, CLINTON COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 375; decrease since 1900, 57. Estimated 1915, 400a

LOCATION

Southern Clinton County, 10 miles northeast of Lock Haven; along White Deer & Logantown R. R.

INDUSTRIES

Farming; saw and planing mills.

WATER SUPPLY

Municipal works purchased 1911 from Logantown Water Co. (unincorporated), which has supplied village more than 40 years.

SOURCE AND COLLECTION

Spring 0.5 mile north of borough on side hill; small reservoir stores water; another spring 100 feet farther up gap piped to it. Water soft.

DISTRIBUTION

By gravity through 1.5 miles of mains, principally 6-inch and 2-inch; pressures 37 to 50 pounds; several 2-inch fire hydrants.

CONSUMPTION

About 390 persons supplied; 100 taps. Stated average daily consumption 3,200 gallons, which, considering number of persons supplied, is low.

COST AND REVENUE

Total cost of works, $3,400; annual operating expenses, slight; gross revenue, $475.

MILESBURG BOROUGH, CENTRE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 531; decrease since 1900, 63. Estimated 1915, 530.

LOCATION

Central Centre County, on Bald Eagle Creek, 2 miles north of Bellefonte; along Bald Eagle Valley Branch of Pennsylvania R. R.

INDUSTRIES

Agriculture; brick works, power plant.

WATER SUPPLY

Municipal supply since 1900,

SOURCE AND COLLECTION

Mountain spring run, 1.25 miles southeast of borough a 100,000 gallon reservoir with concrete dam; watershed area 6 acres. Water soft.

DISTRIBUTION

By gravity through 2.25 miles of 6-inch main reducing to 4-inch; pressures 70 to 180 pounds; 14 fire hydrants, 3-inch.

CONSUMPTION

About 530 people supplied; 118 taps. Consumption not known; assuming 40 gallons per capita would be about 21,200 gallons per day.

PINE GROVE MILLS (FERGUSON TWP.), CENTRE COUNTY

PINE GROVE WATER COMPANY

Estimated population 1915, 325a

LOCATION

Southern Centre County on headwaters Spring Creek; along Bellefonte Central R. R.

INDUSTRIES

Agriculture; flour mill, saw mills.

WATER SUPPLY

Pine Grove Water Co., incorporated 1877 for Pine Grove Mills.

SOURCE AND COLLECTION

Two springs 0.75 mile south of village; 3,600 gallon reservoir over springs; watershed area 300 acres. Water soft.

DISTRIBUTION

By gravity from reservoir through 0.84 mile of mains, chiefly 2-inch and 2½-inch.

CONSUMPTION

About 300 persons supplied. Daily consumption not known; assuming 40 gallons per capita, would be about 12,000 gallons, 98% domestic and 2% industrial.

PLEASANT GAP (SPRING TWP.), CENTRE COUNTY

PLEASANT GAP WATER SUPPLY COMPANY

Estimated population 1915, 700a

LOCATION

Central Centre County, on Logan branch of Spring Creek, along Lewisburg and Bellefonte Branch of Pennsylvania R. R., about 3 miles south of Bellefonte; in a mountain gap.

INDUSTRIES

Farming and limestone quarries and kilns.

WATER SUPPLY

Pleasant Gap Water Supply Co., incorporated 1910 for Pleasant Gap.

SOURCE AND COLLECTION

Three springs on Bilger property, about 0.5 mile above village; water collected into 75,000 gallon reservoir. Springs from sandstone, fairly steady yield throughout year; considered good for a total of 75,000 gallons per day. Water soft.

DISTRIBUTION

By gravity through 8-inch main; pressure 40 to 135 pounds, according to elevation; distributing mains 1.75 miles, 0.25 mile 6-inch, 1 mile 4-inch and 0.5 mile 2-inch; 14 fire hydrants, 4-inch.

CONSUMPTION

About 400 people supplied; 80 taps; no meters. Estimated consumption 40,000 gallons per day; lime kilns and quarries use probably 30,000 gallons.

PORT MATILDA (WORTH TWP.), CENTRE COUNTY

PORT MATILDA WATER COMPANY

Estimated population 1915, 400a

LOCATION

Southwestern Centre County, on headwaters of Bald Eagle Creek, 14 miles northwest of Tyrone; along Tyrone Division, Pennsylvania R. R.

INDUSTRY

Lumbering.

WATER SUPPLY

Port Matilda Water Co., incorporated 1909 for Port Matilda.

SOURCE AND COLLECTION

Springs on north side Muncy Mountain, 1 mile east of center of village; 18,000 gallon reservoir 200 feet below spring and 204 feet above town; estimated minimum flow 70,000 gallons per day. Water soft to medium hard.

DISTRIBUTION

By gravity through 1.1 miles of mains, principally 4-inch and 1½-inch; pressures 60 to 90 pounds.

CONSUMPTION

About 300 persons supplied; 42 taps. Average daily consumption about 2,000 gallons; maximum 4,000; all domestic.

RENOVO BOROUGH, CLINTON COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 4,621; increase since 1900, 539. Estimated 1915, 5,000.

LOCATION

North central Clinton County, on West Branch of Susquehanna River; on Erie Division of Pennsylvania R. R. Range of elevation in district supplied 644 to 695.

INDUSTRIES

Railroad town, large machine, car and repair shops of Pennsylvania R. R.

WATER SUPPLY

Municipal supply since in the 60's. Pennsylvania R. R. has private supply. Emergency connection between two systems for using during droughts.

MUNICIPAL WATER WORKS.

SOURCE AND COLLECTION

A 275,000 gallon reservoir on Drury Run, 3.5 miles above its mouth, at elevation 859; watershed area 10 square miles. Further upstream 2,500,000 gallon reservoir, at elevation 988. Water soft.

DISTRIBUTION

By gravity through 1 mile of 16-inch main from new reservoir, connecting below old reservoir with 10-inch supply main, and by 4 miles of 10-inch main from old reservoir to borough. Distributing mains in borough as follows:

Size (inches),	10	8	6	4	Total
Length (miles),	0.8	1.2	0.7	0.2	2.9

Pressures 52 to 65 pounds; 34 fire hydrants, 4-inch.

CONSUMPTION

About 5,000 persons supplied; 1,200 taps. Stated average daily consumption, determined by weir measurment, 1,000,000 gallons; maximum 1,500,000 gallons; 14,000 gallons industrial. No meters.

COST AND REVENUE

Total cost of works, $105,000; annual operating expenses $4,400; gross revenue, $6,700.

PROPOSED

It is intended to drill several artesian wells as an auxiliary supply. A hypochlorite treating plant is under construction.

PENNSYLVANIA R. R. SYSTEM

SOURCE AND COLLECTION

(1) Paddy Run; upper reservoir capacity 1,500,000 gallons; lower reservoir 300,000 gallons; watershed area about 10 square miles.

(2) West Branch Susquehanna River; pumping station has two Worthington pumps, combined capacity 2,000,000 gallons daily.

DISTRIBUTION

From (1) by gravity through 12-inch main; larger reservoir used for boiler supply and smaller for general system. Hypochlorite plant for temporary use.

From (2) by pumping for locomotive and boiler purposes.

CONSUMPTION

Supply to shops for industrial and drinking purposes, to small suburb for domestic use, tenement houses in railroad yards and P. R. R. Y. M. C. A. in Renovo. Stated average daily consumption 763,000 gallons, of which 487,000 gallons from run and 276,000 gallons from river.

SNOW SHOE BOROUGH, CENTRE COUNTY

SNOW SHOE WATER COMPANY

Population 1910 census, 643. Estimated 1915, 700.

LOCATION

Northern Centre County, on headwaters of Beech Creek; on Bellefonte & Snow Shoe Branch of Pennsylvania R. R. Mining district.

WATER SUPPLY

Snow Shoe Water Co., incorporated 1905 for Snow Shoe Township.

SOURCE AND COLLECTION

Mountain spring 2.5 miles south of borough, near headwaters of South Fork of Beach Creek; minimum flow about 1,000,000 gallons daily; 500,000 gallon reservoir over spring. Water soft.

DISTRIBUTION

By gravity through 3.5 miles of mains principally 6-inch and 4-inch; pressures 65 to 75 pounds; 4 fire hydrants, 6-inch.

CONSUMPTION

About 790 persons supplied; 90 taps. Stated average daily consumption 200,000 gallons, 75% domestic and 25% industrial. Pennsylvania R. R. supplied with about 20,000 gallons daily.

SOUTH RENOVO BOROUGH, CLINTON COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 805; increase since 1900, 380. Estimated 1915, 1050a

LOCATION

Central Clinton County, on West Branch of Susquehanna River, directly across from Renovo borough; along Buffalo and Erie Division of Pennsylvania R. R.

INDUSTRIES

Most of inhabitants work in P. R. R. shops.

WATER SUPPLY

Municipal water plant built in 1907.

SOURCE AND COLLECTION

(1) Hall Run, 3.5 miles southwest of borough on State forest reservation; water impounded in 360,000 gallon reservoir; drainage area about 10 square miles.

(2) Springs on mountain side used during winter and wet seasons; main to Hall Run closed during these seasons. Water soft.

DISTRIBUTION

By gravity through 4 miles of 8-inch pipe from reservoirs; 6-inch and 4-inch mains in borough; pressures 84 to 95 pounds; 10 fire hydrants, 4-inch.

CONSUMPTION

About 1,100 persons supplied through 265 taps, including families outside borough along pipe lines. Daily consumption not known; allowing 40 gallons per capita, would be 44,000 gallons.

COST AND REVENUE

Total cost of works, $34,800; annual operating expenses, $1,514.

HISTORICAL

Borough at first supplied by South Renovo Water Co., incorporated 1889; this company was taken over by borough in 1907.

STATE COLLEGE BOROUGH, CENTRE COUNTY

STATE COLLEGE WATER COMPANY

STATE COLLEGE PRIVATE SYSTEM

Population 1910 census, 1,425; increase since 1900, 574. Estimated 1915, 1,850.
(Exclusive of college students)

LOCATION

South central Centre County, near headwaters of Spring Creek; at terminus of Bellefonte Central R. R. On hill in broad valley between Bald Eagle and Tussey Mountains. Elevations 1,100 to 1,200 feet above sea level. Built-up portion of borough has range of elevation about 80 feet, and college campus slopes up about 40 feet higher.

INDUSTRIES

Rapidly growing college town; farming.

WATER SUPPLY

Borough supplied by State College Water Co., incorporated 1892 for College Township. College supplied by its own works, under charters of University Water Co., incorporated 1907 for Ferguson Township, and Campus Water Co., incorporated 1908 for State College Borough; stock of both in hands of College trustees. University Water Co., is change of name, in 1908, from Farmers Rural Water Co.

STATE COLLEGE WATER COMPANY

SOURCE AND COLLECTION

Shingletown Gap Run, about 3.5 miles southeast of borough; intake reservoir, 500,000 gallons capacity, about 180 feet above center of borough; watershed area above intake 2.2 square miles. Formerly another intake at much higher elevation, but abandoned on account of leakage. Water soft.

Additional supply was proposed from Galbraith Gap Run, about 6.5 miles east of State College and 2 miles east of Boalsburg, on which the company recently built a small dam and 750,000 gallon intake reservoir at approximately 280 feet elevation above borough; area of watershed variously stated from 3.25 to 4.25 square miles. A permanent injunction has been issued on complaint of Boalsburg Water Co. against use of this stream by State College Water Co. The

Boalsburg Water Co. is now taking its supply from an intake below. Rapid growth of borough demands additional supply.

DISTRIBUTION

By gravity from reservoir on Shingletown Gap Run. Delivery main a short stretch of 12-inch and 10-inch pipe about 3 miles double line 8-inch and 6-inch paralleled with 6-inch, which combine into mile of 12-inch entering borough. Mains of University Water Co., which supplies college, have metered connection with mains of State College Water Co., latter supplying former at certain seasons. In case of fire, State College plant sometimes pumps into water company's mains, thus providing higher pressure and increased supply. Pressures in borough 20 to 80 pounds, according to elevation. Distributing mains as follows:

Size (inches),	12	6	4	3	2	1½	1	Total
Length (miles),	0.26	2.59	2.84	0.36	1.21	0.17	0.41	7.84

Thirty-four fire hydrants.

CONSUMPTION

Population supplied, including students at college, is about 4,000 through 533 taps. No means of measuring consumption, but estimated at 400,000 gallons per day average and 450,000 to 500,000 gallons maximum, about 25% industrial. State College supplied at times with as much as 70,000 gallons per day although yearly average is about 9,000 gallons.

STATE COLLEGE

SOURCE AND COLLECTION

(1) From headwaters of Mussers Gap Run, fed by springs; watershed area about 0.5 square mile; a 350,000 gallon intake reservoir about 4 miles south of college. This source used comparatively little in dry season. Water soft; from sandstone formation.

(2) From well driven into limestone rock on college grounds, from which water is pumped into mains, amounting at times to 200,000 gallons or possibly more. Water hard.

(3) From State College Water Co.'s system, as above.

DISTRIBUTION

From (1) by gravity through 8-inch supply main. From (2) by pumping. Water lifted by compressed air from Ingersoll-Rand steam-operated compressor and forced by Worthington duplex pump into mains; capacity of pumps 1,200 gallons per hour. Pressure at pumps can be raised to 125 pounds if required. Normal pressures in mains

70 to 130 pounds, according to elevation and use. Distributing and supply mains as follows:

Size (inches),	8	6	4	3	2	Total
Length (miles),	4.63	0.55	0.85	0.38	0.47	6.88

Twenty-one fire hydrants.

CONSUMPTION

Average daily consumption 150,000 gallons, measured by meter; maximum 400,000 gallons. A large part of this water is used in laboratories. There are about 2,100 students, and in addition about 50 families, including a number of farms along pipe line from Mussers Gap and some residences on campus. No water rents collected, the farmers supplied receiving water as consideration for right of way of pipe line.

TYLERVILLE (LOGAN TWP.), CLINTON COUNTY

TYLERVILLE WATER SUPPLY COMPANY

Estimated population 1915, 200a.

LOCATION

Southern Clinton County, 11 miles south of Lock Haven, on Big Fishing Creek. Farming district.

WATER SUPPLY

Tylersville Water Supply Co., chartered 1902 for Tylerville; began supplying in 1903.

SOURCE AND COLLECTION

Spring 0.75 mile south of village, in gap of mountain; water to 2,500 gallon reservoir. Water soft.

DISTRIBUTION

By gravity through 0.75 mile of 3-inch supply main with 2½-inch and 1½-inch laterals.

CONSUMPTION

About 200 people supplied; 35 taps. Consumption 1,500 gallons daily, all domestic.

HISTORICAL

Village at first supplied by system built by townspeople securing water from tail race of mill on spring run. In 1859 the Tylerville Water Co., incorporated, put in system obtaining supply from this run at a point 0.5 mile south of village. Wooden pipes carried water to cisterns between houses. Pipes became useless and company ceased operation in 1898.

UNIONVILLE BOROUGH, CENTRE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 343; decrease since 1900, 17. Estimated 1915, 390a.

LOCATION

West Central Centre County, on Bald Eagle Creek; along Bald Eagle Branch Pennsylvania R. R. Range of elevations in district about 150 feet. Known as Fleming Post Office. Farming district.

WATER SUPPLY

Municipal works built in 1913.

SOURCE AND COLLECTION

Two springs on west side of Muncy Mountain, 0.5 mile west of borough. Water piped through 4-inch terra cotta pipe, 50 feet and 18 feet long, to 35,000 gallon reservoir nearby, elevation 160 feet above borough. Water medium hard.

DISTRIBUTION

By gravity through 0.75 mile 6-inch supply main to borough thence through 1.1 miles 6-inch, 4-inch and 2-inch distributing mains; pressures 65 to 70 pounds; fifteen fire hydrants, 6-inch.

CONSUMPTION

About 150 persons served; 50 taps. No means of measuring consumption; but assuming 40 gallons per capita, would be 6,000 gallons, all domestic.

WELLSBORO, TIOGA COUNTY.

WELLSBORO WATER COMPANY

Population 1910 census, 3,183; increase since 1900, 229. Estimated 1915, 3,200a.

LOCATION

County seat, east of center of Tioga County, on branch of Marsh Creek, a tributary of Pine Creek; along New York Central & Hudson River R. R. Situated in a hollow surrounded by hills through which natural watercourses pass to a junction at lower end of borough.

INDUSTRIES

Condensed milk factory, chemical, cut glass and window glass works, saw mill and carriage factory.

WATER SUPPLY

Wellsboro Water Co., incorporated 1885 for Wellsboro; supplying since 1886.

SOURCE AND COLLECTION

(1) Small intake dam on Rock Run and Morgan Spring, nearby.

(2) Small intake dam on Mickle Run and Wilson, Ulik and Williams springs, nearby.

(3) Small intake dam on Charleston Creek and Clark Spring, nearby.

(4) McConnell Spring and five smaller springs near Brownlee.

(5) Drilled well near Brownlee, with 32 g. p. m. deep well pump connected to 6 hp. gasoline engine.

Drilled well and water from Mickle Run and Charleston Creek used only during dry seasons as auxiliary supplies. Water from Morgan Spring and Charleston Creek chemically treated.

From intake on Mickle Run 8-inch pipe leads about 1,800 feet to Wilson, Ulik and Williams Springs; each walled up, under lock and key, and having 4-inch pipe to main conduit. Below this point main conduit changes to 6-inch pipe, for 8,000 feet to small dam across Rock Run, which connects through a 6-inch pipe. At 2,400 feet below, a 4-inch pipe from Morgan Spring and a pipe from well at Brownlee join 6-inch main conduit; beyond junction main changes to 8-inch and leads down valley 4,100 feet, where it is joined by pipe from Clark Spring; 1,300 feet farther the main conduit enters gate house containing a 19,000 gallon stone reservoir, receiving also a 6-inch

pipe line from an intake on Charleston Creek. McConnell Spring has a dam with filter box, 5,000 feet of 6-inch and 3,000 feet of 4-inch pipe entering the main conduit below gate house.

From gate house a 12-inch pipe leads 5.8 miles to Wellsboro and two storage reservoirs, capacities 17,000,000 gallons and 5,000,000 gallons, on top of hill in southeastern part of borough. Stored waters chemically treated with copper sulphate since 1904, to destroy algae. Total distance from reservoir to first intake on Mickle Run 9.2 miles. Supply mains as follows:

Size (inches),	12	8	6	4	Total
Length (miles),	5.8	1.4	3.5	2.0	12.7

DETAILS OF SUPPLY

Source	Avg. yield in gals. per day	Min. yield in gals. per day	Watershed area square miles
Mickle Run,		24,000	2.0
Wilson Spring,	24,000		
Ulik Spring,	20,000	2,000	
Williams Spring,	38,000		
Rock Run,	60,000	2,000	0.5
Morgan Spring,	50,000	10,000	
Clark Spring,	10,000	1,000	
McConnell Springs,	40,000	20,000	1.0
Charleston Creek,		75,000	2.5
Brownlee Well,		54,000	
Total,	242,000	188,000	

Water soft.

DISTRIBUTION

By gravity; pressures 30 to 80 pounds. Distributing mains as follows:

Size (inches),	12	10	8	6	4	1	Total
Length (miles),	0.7	0.1	0.7	3.6	4.0	0.8	9.9
Per cent.,	(	15	)	36	41	1	100

Seventy-six fire hydrants, 4-inch.

CONSUMPTION

About 2,500 persons supplied through 700 taps; 28 taps metered, all industrial. Stated average daily consumption about 250,000 gallons; maximum 300,000 gallons; 90% domestic and 10% industrial; determined by metering industrial and estimating domestic.

WESTERN PENITENTIARY OF PENNSYLVANIA, CENTRE COUNTY

PRIVATE SUPPLY

LOCATION AND DESCRIPTION

Near central Centre County, at Peru Station, on Pennsylvania R. R. about 6 miles south of Bellefonte. Land purchased under Act of 1911 for new prison site and buildings to replace existing plant at Allegheny. Work on buildings and grounds now in progress. Water supply system installed, sufficient for present purposes, and will be increased as work develops.

SOURCE AND COLLECTION

McBrides Gap Run, rising in western extremity of Nittany Mountains; fed by numerous springs rising in sandstone formation; small concrete intake at junction of east and west branches in mountain gap; watershed area 3.25 square miles; elevation, 1,350. Estimated available minimum yield with full storage development, 900,000 gallons per day.

DISTRIBUTION

By gravity through 8-inch main about 1.5 miles long to Boalsburg Turnpike and thence distributed to various parts of property, through 3.7 miles of mains, chiefly 4-inch.

CONSUMPTION

At present only small amount used for minor construction purposes and force engaged thereon. Will be from 1,500 to 3,000 persons at institution when completed, at which time the consumption may reach 600,000 gallons to 800,000 gallons per day.

SECTION No. 8

SUSQUEHANNA RIVER

LOWER WEST BRANCH SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

Table of Industrial Water Supplies (Coal Companies)

SECTION No. 8

SUSQUEHANNA RIVER—LOWER WEST BRANCH SUB-BASIN.

GENERAL DESCRIPTION

LOCATION AND EXTENT

The lower West Branch Sub-basin of the Susquehanna River is in the northern central part of Pennsylvania, east of the Middle West Branch, south of the Upper North Branch and west of the Lower North Branch Sub-basin. It comprises an area of about 1,784 square miles, 4% of the State, roughly square in shape, and covers all the territory in Pennsylvania drained by the West Branch below the mouth of Pine Creek. It includes the greater part of Sullivan, Lycoming, Union and Montour counties and small portions of Bradford, Tioga, Wyoming, Columbia, Northumberland, Clinton and Centre counties.

SURFACE CHARACTERISTICS

The northern half of this section is in the eastern portion of the Allegheny plateau, while the southern half is traversed by the ridges of the Alleghenies running from west to east. The surface is marked by high hills and ridges, with deep valleys which broaden near the junction of the West and North Branches of the Susquehanna River. The terminal moraine crosses this area just above the center, through Lycoming County, in a northwest and southeast direction, the upper portion containing numerous lakes and ponds. The most important tributaries of the West Branch are Lycoming, Loyalsock and Muncy creeks.

POPULATION

The population is small and scattered except that in the vicinity of Williamsport City, the most densely populated section lying along the West Branch Valley. Only four boroughs in the territory have over 2,500 population. Of the total population of over 126,000 in 1910, the urban population was 44%. The section averages approximately 72 persons per square mile, as compared with 171 for the State, and the population, representing 2% of that of the State, increased 5% from 1900 to 1910.

RESOURCES AND INDUSTRIES

The chief natural resources are deposits of coal and the large forests in the northern portion, while the southern portion is an agricultural district. The principal industries are mining and lumbering with manufacturing establishments in the larger communities.

WATER SUPPLY

There are many possibilities for water supply development in this region. Public and railroad systems predominate, the private industrial supplies being comparatively insignificant. Only 860,000 gallons per day are reported as pure gravity supplies, about 6.2% of the total consumption of the section, and nearly all of this is used by railroads and industries. Mountain streams are relied upon for a large proportion of the supply.

Twelve public supplies are reported, of which only two are municipally owned. The Jersey Shore Water Co. operates in Jersey Shore and neighboring centers; the White Deer Mountain Water Co. in Milton, and vicinity; and the Williamsport Water Co. in Williamsport and neighboring towns. These three companies supply more than 9,800,000 gallons per day, or 90% of the public consumption of the section. The aggregate population served by water supply systems is less than 76,000.

The railroad consumption aggregates about 3,000,000 gallons, 55% of which is furnished by the companies or their subsidiaries. The principal user is the Pennsylvania R. R., and and its chief consumption is in the Northumberland yards. The principal private industrial supplies are those of the Elk Tanning Co., which consumes over 800,000 gallons per day in four establishments.

The following tables show details of the water supplies in this section, both domestic and industrial, after which are detailed descriptions of the water supply systems arranged alphabetically according to places supplied:

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 8

Place	County	Ownership or control	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Dushore,	Sullivan,	Dushore W. Co.,	860	400			1				
Eagles Mere,	Sullivan,	Eagles Mere W. Co.,	225	2,600*			1				
Hughesville,	Lycoming,	Hughesville Home W. Co.,	2,000	1,200			1				
Jersey Shore,	Lycoming,	Jersey Shore W. Co. (United Water & Guarantee Co.)	6,000	5,381			1				
Avis,	Clinton, Pine Creek Twp.,									—	
Antes Fort,	Lycoming, Nippenose Twp.,		300b							—	
Porter Twp. (part),	Lycoming,		1,100b							—	
Salladasburg,	Lycoming,		300				—				
Laporte,	Sullivan,	Mokoma Spring W. Co.,	240b	150			1				
Mifflinburg,	Union,	Municipal,	1,600	1,560				1			
Milton,	Northumberland,	White Deer Mountain W. Co.,	8,500	20,000			1				
Milton Suburbs,	Northumberland,										
East Buffalo Twp. (part),	Union,		1,300							—	
Kelly Twp. (part),	Union,		1,250							—	
Lewisburg,	Union,		3,000				—				
Watsontown,	Northumberland,		2,000				—				
White Deer Twp. (part)	Union,		1,850							—	
Montgomery,	Lycoming,	Montgomery W. Co.,	1,700b	1,040			1				
Montoursville,	Lycoming,	Municipal,	2,000	1,700				1			
Muncy,	Lycoming,	Muncy W. S. Co.,	2,000	1,700			1				
Picture Rocks,	Lycoming,	Private,	700	125					1		
Williamsport,	Lycoming,	Williamsport W. Co.,	40,000	40,000	1						
So. Williamsport,	Lycoming,						—				
Duboistown,	Lycoming,						—				
Newberry,	Lycoming,									—	

*Summer population.
bEstimated by Water Supply Commission.

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 8—Continued

Place	County	Ownership or control	Supply: Source: Surf.	Supply: Source: Ground	Supply: Source: Comb.	Supply: Method: Grav.	Supply: Method: Pumped	Supply: Method: Comb.	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Dushore,	Sullivan,	Dushore W. Co.,	---	---	1	---	---	1			40,000	100t
Eagles Mere,	Sullivan,	Eagles Mere W. Co.,	---	---	1	---	---	1	67,500		67,500	26d
Hughesville,	Lycoming,	Hughesville Home W. Co.,	---	1	---	---	1	---	100,000	50,000	150,000	125t
Jersey Shore,	Lycoming,	Jersey Shore W. Co. (United Water & Guarantee Co.)	1	---	---	---	---	1	500,000	1,050,000	1,550,000	290t
Avis,	Clinton, Pine Creek Twp.,											
Antes Fort,	Lycoming, Nippenose Twp.,											
Porter Twp. (part),	Lycoming,											
Salladasburg,	Lycoming,											
Laporte,	Sullivan,	Mokoma Spring W. Co.,	---	---	1	---	---	1			4,000a	------
Mifflinburg,	Union,	Municipal,	1	---	---	1	---	---	78,000b	23,000a	101,000b	------
Milton,	Northumberland,	White Deer Mountain W. Co.,	1	---	---	---	---	1	1,300,000	1,000,000	2,300,000	115t
Milton Suburbs,	Northumberland,											
East Buffalo Twp. (part),	Union,											
Kelly Twp. (part),	Union,											
Lewisburg,	Union,											
Watsontown,	Northumberland,											
White Deer Twp. (part)	Union,											
Montgomery,	Lycoming,	Montgomery W. Co.,	---	---	1	---	---	1			130,000a	------
Montoursville,	Lycoming,	Municipal,	---	---	1	---	---	1			300,000	177t
Muncy,	Lycoming,	Muncy W. S. Co.,	1	---	---	---	---	1	185,000	65,000	250,000	147t
Picture Rocks,	Lycoming,	Private,	---	1	---	1	---	---	3,800b		3,800b	------
Williamsport,	Lycoming,	Williamsport W. Co.,	---	---	1	---	---	1	4,000,000a	2,000,000a	6,000,000a	------
So. Williamsport,	Lycoming,											
Duboistown,	Lycoming,											
Newberry,	Lycoming,											

aEstimated by water companies.
bEstimated by Water Supply Commission.
dDomestic.
tTotal.

RAILROAD WATER SUPPLIES, SECTION NO. 8

LEHIGH VALLEY

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Lopez,	Loyalsock Creek,	Pumped,	32,000	
Dushore,	Stee Father Run,	Gravity,	11,700	

NORTHERN CENTRAL

Williamsport,	City main,			165,000
Trout Run,	Stream,	Gravity,	55,000	
Ralston,	Well,	Pumped,	80,000	
Ralston,	Red Run,	Gravity,	45,000	
Penbryn,	Stream,	Pumped,	57,000	
Penbryn,	Stream,	Pumped,	57,000	

NEW YORK CENTRAL & HUDSON RIVER

Jersey Shore Jct.,	J. S. W. Co.,			69,000
N. B. Jct.,	Wmspt. W. Co.,			160,000

PENNSYLVANIA

Nisbet,	Run,	Gravity,	51,000	
Montoursville,	Run,	Gravity,	50,000	
Kapps,	Run,	Gravity,	10,000	
Northumberland,	Northumberland W. Co.,			35,000
Northumberland Yard,	Molly Bullion Spring and river	Pumped,	1,000,000	
DuBoistown,	City,			85,000
Williamsport,	City,			300,000
Williamsport Lumber Br.,	City,			8,000
Watsontown,	Creek,	Gravity,	102,000	
Milton,	Creek,	Gravity,	2,000	
Lewisburg,	Water Co.,			20,000

SUSQUEHANNA, BLOOMSBURG & BERWICK

Watsontown,	Watsontown W. Co.,			30,000

SUSQUEHANNA & NEW YORK

Ellenton,	Springs source of Rock Run	Gravity,	8,000	
Short Run,	Short Run, trib. to Pleasant Stream	Gravity,	18,000	
Marsh Hill Jct.,	Driven well, 6 in. x 42 ft.,	Pumped,	15,000	
W. Williamsport Shops,	Driven well, 6 in. x 94 ft.,	Pumped,	18,000	

WHITE DEER & LOGANTON

White Deer Jct.,	Spring,	Gravity,	2,000	
Clam Bake Springs,	Spring,	Gravity,	2,000	
Mile Run,	Mile Run,	Gravity,	2,000	

RAILROAD WATER SUPPLIES, SECTION NO. 8—Continued

WILLIAMSPORT & NORTH BRANCH

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Hughesville,	H. Home W. Co.,			480
Glen Mawr,	Private spring,		200	
Sonestown,	Muncy Creek,	(Pumped 4 months in year)	800	

PHILADELPHIA & READING

Shamokin Division				
Muncy,	Muncy W. S. Co.,			30,000
Milton (Dougal),	Mountain W. Co.,			3,000
Newberry Jct.,	Mountain W. Co. and P. & R. well		50,000	250,000
West Milton,	Kelly W. Co.,			130,000
Williamsport,	Wmspt. W. Co.,			20,000
Totals,			1,668,700	1,305,480

INDUSTRIAL WATER SUPPLIES, SECTION NO. 8 (MISCELLANEOUS COMPANIES)
Does Not Include All the Smaller Companies

Place	Company	Source	Method	Consumption (gallons per day)	
				Domestic	Industrial
Hillsgrove, Sullivan County,	Elk Tanning Co.,	Mill Creek,	Gravity,	4,000b (200 pop.)	200,000
LaPorte, Sullivan County,	Elk Tanning Co.,	Mill Creek and well,	17,000 gallon reservoir gravity		150,000
Ralston, Lycoming County,	Elk Tanning Co.,	Rock Run and well,	Pumped,		200,000
Roaring Branch, Lycoming County,	Elk Tanning Co.,	Drilled wells,	Pumped,		300,000
Total from private systems,				4,000	850,000

INDUSTRIAL WATER SUPPLIES, SECTION NO. 8 (COAL MINING COMPANIES)

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
Sullivan County:							
Bernice,	Connell Anthracite Mine Co.,	Birch Creek,	31,000,000 gal. res., pumped,		s 300,000	1,184	1
	O'Boyle Foy Anthracite C. Co.,	Birch Creek,	45,000 gal. res., pumped,	500	s 35,000	477	1
Lopez,	Northern Anthracite C. Co.,	Springs,	Gravity,		*(480 hp.)	938	1
		Loyalsock Creek,	Pumped,				
Mildred,	Wachna-Taylor Anthracite C. Co.	Birch Creek,	Pumped,		5,000	43	1
Total from private systems,				500	340,000		

* Capacity of boilers
s Water for steam purposes

DUSHORE BOROUGH, SULLIVAN COUNTY

DUSHORE WATER COMPANY

Population 1910 census, 813; decrease since 1900, 71. Estimated 1915, 860a

LOCATION

Northeastern Sullivan County, at headwaters of Little Loyalsock Creek; along Lehigh Valley R. R.

INDUSTRIES

Two silk mills, flour mill, planing mill, creamery; farming community.

WATER SUPPLY

Dushore Water Co., incorporated 1893 for Dushore Borough.

SOURCE AND COLLECTION

(1) Pain Creek, tributary of Loyalsock Creek; 700,000 gallon reservoir 2 miles from borough and 0.5 mile above mouth of creek: watershed area 0.4 square mile, 14 acres owned by water company. Water soft.

(2) Drilled well near reservoir 6-inch by 130 ft. Water pumped into reservoir by Gould pump operated by 3 hp. gasoline engine.

DISTRIBUTION

By gravity through 1.6 miles 6-inch, 2.1 miles 4-inch and 0.1 mile 3-inch mains; pressures 30 to 140 pounds; 36 fire hydrants, 6-inch.

CONSUMPTION

About 400 persons supplied; 103 taps. Average daily consumption, by pump displacement, 40,000 gallons; maximum 50,000 gallons; 25% industrial.

EAGLES MERE BOROUGH, SULLIVAN COUNTY

EAGLES MERE WATER COMPANY

Population 1910 census, 184; decrease since 1900, 128. Estimated 1915, 225a. Summer population 2,600

LOCATION

West central Sullivan County, on Lewis Lake; along Susquehanna & Eagles Mere R. R.; at top and in heart of mountains.

INDUSTRIES

A summer resort; population increased to 2,600 or 3,000 at times.

WATER SUPPLY

Eagles Mere Water Co., incorporated 1901 for Eagles Mere Borough; operates plant from last week of April to middle of October each year.

SOURCE AND COLLECTION

(1) Mainly from artesian well 200 feet deep, 150 feet from southwest edge of lake and near outlet.

(2) Eagles Lake, used as auxiliary supply, especially in case of fire. Lake fed by springs at bottom, 40 feet deep in places. Tributary drainage area about 200 acres.

Water pumped from well by 112,500 gallon Gould pump with 6-inch suction and working against maximum head of 236 feet.

Water from lake taken about 330 feet from shore, at depth of 12 feet, through 6-inch suctions, by two 192,000 gallon Gould triplex pumps, and forced through a one unit Roberts pressure filter, capacity 422,000 gallons per day; thence into 91,800 gallon steel standpipe, 12.5 feet by 100 feet, on Crestmont Hill; bottom 136 feet above pumps. Water from lake soft; that from well hard. Pumps operated during day only; belt-connected to jack shaft, driven by 40 hp. Westinghouse electric motor. Springfield 30 hp. gas engine in reserve belted to same jack shaft.

DISTRIBUTION

By gravity from standpipe. Mains as follows:

Size (inches),	8	6	4	3	2	Total
Length (miles),	.07	1.38	.58	.36	.64	3.03

Pressures, 67 to 80 pounds, fire pressure of about 135 pounds; 15 fire hydrants 6-inch, principally 4-inch connection to main. In case

of fire, by using the two triplex pumps, a pressure of over 200 pounds, giving three 1-inch fire streams, could be obtained.

CONSUMPTION

About 2,600 persons supplied daily during the season; 70 taps. Average daily consumption about 67,450 gallons; maximum 146,000 gallons, all domestic; measured by pump displacement. One tap metered; four other meters installed on trial.

HUGHESVILLE BOROUGH, LYCOMING COUNTY

HUGHESVILLE HOME WATER COMPANY

Population 1910 census, 1,650; increase since 1900, 122. Estimated 1915, 2,000a

LOCATION

Eastern Lycoming County, on Muncy Creek; along Williamsport & North Branch R. R.; 5 miles northeast of Muncy.

INDUSTRIES

Wagon factory and two furniture factories; general offices of Williamsport & North Branch R. R.

WATER SUPPLY

Hughesville Home Water Co., incorporated 1904 for Hughesville Borough, has supplied borough since 1905.

SOURCE AND COLLECTION

Drilled wells, along Muncy Creek, about 0.5 mile north of borough. Water soft.

DISTRIBUTION

By pumping directly into mains, surplus being forced into 500,000 gallon equalizing reservoir on hillside back of pumping station. Pumping installation one 8½x10 Smith-Vail 230,400 gallon triplex pump, one 7x12, 172,800 duplex pump, one 24 inch Wolf turbine of 40 hp. driven by 25 hp. gasoline engine, as auxiliary.

Distributing and supply mains as follows:

Size (inches),	8	6	4	2	Total
Length (miles),	1.6	1.4	2.2	0.2	5.4

Pressures, 80 to 85 pounds; 40 fire hydrants, 4-inch.

CONSUMPTION

About 1,200 persons supplied; 310 taps. Average daily consumption by pump displacement, 150,000 gallons; about 50,000 gallons industrial.

JERSEY SHORE, SALLADASBURG AND AVIS BOROUGHS AND NEARBY VILLAGES, LYCOMING AND CLINTON COUNTIES

THE JERSEY SHORE WATER COMPANY
(United Water & Guarantee Co.)

	Population 1910 census	Increase since 1900	Estimated 1915
Lycoming County:			
Jersey Shore,	5,381	2,311	6,000a
Salladasburg,	280	19	300a
Porter Township (portion),			
Antes Fort Village,			
Pine Creek Township:			
Avis Village,			

LOCATION

Southwestern Lycoming County and eastern Clinton County, on both sides of Pine Creek and west branch of Susquehanna River at their junction; traversed by New York Central & Hudson River R. R. and Allegheny Division of Pennsylvania R. R.

INDUSTRIES

Jersey Shore has railroad shops and yards, machine shops, foundries, silk mills, knitting mills, American Balance Valve Co. In the rest of district agriculture is chief industry.

WATER SUPPLY

The Jersey Shore Water Co., incorporated 1884 for Jersey Shore Borough, controlled by United Water & Guarantee Co. of Harrisburg, Pa., operates in the territory around Jersey Shore through charters of controlled companies as follows:

Company	Inc.	Incorporated for
Jersey Shore Water Co.,	1884	Jersey Shore Boro.
Salladasburg Water Co.,	1909	Salladasburg Boro.
Porter Water Co., ------	1901	Porter Twp. from Larrys Creek dam to north line of Jersey Shore Boro.
Tiadaghton Water Co.,	1901	Pine Creek Twp., west line Jersey Shore Boro. to and through Oak Grove (Avis), Clinton County.
Nippenose Water Co., --	1909	Nippenose Twp.; village of Antes Fort.

SOURCE AND COLLECTION

Supply from two sources: (1) Roaring Run, branch of Larry Creek, which passes through Salladasburg and empties into West Branch Susquehanna River at Larry Creek Station. Intake basin 900,000 gallons capacity, 3 miles above Salladasburg and 10 miles from Jersey Shore, first used in 1913; 16-inch gravity main from intake to 2,000,000 gallon distributing reservoir just south of Jersey Shore; watershed area about 3.1 acres. Water soft. (2) Pine Creek, pumping from a point 1 mile above mouth by 2,000,000 gallon pump, 10-inch suction; 12-inch discharge, so connected that can deliver directly into supply mains or to New York Central & Hudson River shops and 25 houses adjacent. Raw water sterilized before going through pump.

DISTRIBUTION

By gravity from (1) and pumping from (2). Supply and distributing mains as follows:

Size (inches), ----------	16	12	10	8	6	4	less than 4	Total
Length (miles), ----------	11.9	2.4	2.3	2.5	4.1	0.6	2.3	26.1
Per cent., ----------	(54.9)		(18.4)		15.7	2.3	8.7	100

Water furnished Jersey Shore from the distributing reservoir through 10-inch main; other subsidiary companies obtain supply from 16-inch main; 62 fire hydrants, all but one 6-inch.

CONSUMPTION

About 5,381 persons supplied; 800 taps, 13 industrial. Average daily consumption, by meter, weir and pump displacement, 1,550,000 gallons; maximum 2,205,000 gallons, about 1,050,000 gallons industrial. Seven taps metered, four industrial. Metered consumption about 1,030,000 gallons daily industrial and 1,500 gallons domestic.

INDUSTRIAL

Susquehanna silk mill, A. K. Bobst ice plant and Ed. Woods's creamery have private supplies for their works.

LAPORTE BOROUGH, SULLIVAN COUNTY

MOKOMA SPRING WATER COMPANY

Population 1910 census, 245; decrease since 1900, 197. Estimated 1915, 240b

LOCATION

Near center Sullivan County; on Williamsport & North Branch Division of Pennsylvania R. R. On small tableland overlooking Lake Mokoma, about 2,000 feet above sea level.

INDUSTRIES

Tannery (Elk Tanning Co.); summer resort.

WATER SUPPLY

Mokoma Spring Water Co., incorporated from small private system 1910 for LaPorte Borough.

SOURCE AND COLLECTION

Present works temporary. Cold Spring and another small spring 0.5 mile south of borough. Water collected in 1,750 gallon reservoir and pumped through 1-inch pipe line to 3,000 gallon wooden tank on Mokoma Heights, about 50 feet above borough. Auxiliary supply by gravity from Doe Run. Pumping installation, one small Fairbanks pump operated by 1½ hp. gasoline engine.

Permanent works (now building) to consist of:

(A) Catch basin at Cold Spring, with 1¼-inch pipe line to 53,000 gallon storage reservoir from which water will be forced by 24,000 gallon Fairbanks pump through 2-inch main to 36,000 gallon distributing reservoir on high ground.

(B) On Doe Run, about 1,800 feet above mouth and 1,000 feet south of Cold Spring, storage reservoir from which water will be pumped to distributing reservoir by 46,000 gallon Gould triplex pump with 2-inch suction and 2-inch discharge. The 2-inch supply main from springs to connect to 2-inch force main from Doe Run.

DISTRIBUTION

By gravity from distributing reservoir through 0.6 mile of 6-inch reducing to 4-inch main; pressure 40 pounds; 2 fire hydrants, 4-inch.

CONSUMPTION

About 150 persons supplied; 5 taps. Average daily consumption 4,000 gallons, all domestic. No means of measurement.

INDUSTRIAL

Elk Tanning Co. secures supply by pumping from Mill Creek, driven well and from spring. Water pumped from well through 3-inch pipe to 17,000 gallon intake on Mill Creek and distributed by gravity through 4-inch pipe from intake dam; 2-inch pipe from spring to few houses. Consumption 150,000 gallons per day.

MIFFLINBURG BOROUGH, UNION COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,559; increase since 1900, 123. Estimated 1915, 1,600a

LOCATION

South central Union County; on Lewisburg & Bellefonte Branch of Pennsylvania R. R.

INDUSTRIES

Machine shops, body and gear works, planing mill, buggy shop and an overall factory. Farming district.

WATER SUPPLY

Municipal supply since 1899.

SOURCE AND COLLECTION

North Branch Creek, a mountain stream; intake 5 miles northwest of and 560 feet above borough; watershed area 14 square miles. Water soft.

DISTRIBUTION

By gravity through 10-inch main reducing to 6-inch; 8-inch main into 94,000 gallon iron equalizing tank on hill south of borough. Sup-

ply and distributing mains, 10 miles, principally 6-inch; pressures 78 to 163 pounds; 40 fire hydrants, 6-inch.

CONSUMPTION

About 1,560 persons supplied; 418 taps, 9 metered. Planing mill uses 3,800 gallons daily and the machine shops 760 gallons. Pennsylvania R. R. occasionally supplied by connecting with fire plug. Consumption not known; assuming 50 gallons per capita, would be 78,000 gallons daily domestic. Industrial consumption about 23,000 gallons additional; 17,500 gallons metered.

MILTON AND WATSONTOWN, NORTHUMBERLAND COUNTY; AND LEWISBURG AND NEIGHBORING VILLAGES, UNION COUNTY

WHITE DEER MOUNTAIN WATER COMPANY

	1910 census	Increase since 1900	Estimated 1915
Northumberland County:			
Milton Borough,	7,460	1,285	8,500
Watsontown Borough,	1,950	52	2,000
Union County:			
Lewisburg Borough,	3,081	376	3,000
East Buffalo Twp.,			
Kelly Twp.,			
White Deer Twp.,			

LOCATION

Territory along both banks of West Branch Susquehanna River, in Union and Northumberland counties; traversed by Philadelphia & Reading Ry., Susquehanna, Bloomsburg & Berwick R. R., White Deer & Loganton R. R. and Erie Division of Pennsylvania R. R.

INDUSTRIES

Milton—Numerous steel and iron works and novelty works.

Watsontown—Shoe, shirt and table factories, several flour and planing mills.

Lewisburg—Woolen and flour mills, furniture factory. Seat of Bucknell University, 700 students.

WATER SUPPLY

White Deer Mountain Water Co., incorporated 1899 for White Deer Township operates through charters of seven companies which it owns and operates, as follows:

Company	Inc.	Incorporated for
Union County:		
East Buffalo Water Co.,	1900	East Buffalo Twp.
Kelly Water Co.,	1900	Kelly Twp.
Lewisburg Water Co. (The),	1883	Lewisburg Boro.
White Deer Creek Water Supply Co.,	1897	Kelly Twp.
Northumberland County:		
Citizens Water Co. of Milton,	1900	Milton Boro.
Mountain Water Co.,	1900	Milton Boro., Turbot & West Chillisquaque Twps.
Watsontown Water Co. (The),	1886	Watsontown Boro.

SOURCE AND COLLECTION

(1) White Deer Creek, tributary to Susquehanna River; intake 5.5 miles above mouth about 250 feet higher than Lewisburg. All water rights on this stream controlled by White Deer Mountain Water Co. and White Deer Mountain Water Supply Co.; watershed area 60 square miles.

(2) Spruce Run, tributary of Buffalo Creek; White Deer Mountain Water Co. has intake with 10-inch line supplying one farmhouse, and expects to build pipe line in 1915; watershed area 12 square miles.

(3) Susquehanna River, used only for emergencies.

At Milton, works operated by Mountain Water Co.; water pumped from river to 2,000,000 gallon storage and distributing reservoir built 1883. Pumping station equipment two 240,000 gallon Worthington pumps, two boilers, 60 and 100 hp.

At Watsontown, works operated by Watsontown Water Co.; water pumped to 1,500,000 gallon reservoir. Pumping station equipment, one 240,000 gallon Worthington pump, one 60 hp. boiler.

At Lewisburg, works operated by Lewisburg Water Co.; water pumped to two standpipes, capacities 110,000 and 170,000 gallons. Pumping station equipment, two 240,000 gallon Worthington pumps, two 60 hp. boilers.

DISTRIBUTION

By gravity; 16-inch line 5.5 miles from intake in White Deer Creek to White Deer station; 10-inch line from White Deer across river to Watsontown; 14-inch line, 3 miles, from White Deer to New Columbia; 12-inch line, 5 miles, from New Columbia to Lewisburg, with two branches, one 10-inch and one 12-inch, crossing river to Milton from West Milton; 6-inch to East Lewisburg from Lewisburg. Total

length of supply and distributing mains in system, including suction, force and distributing mains, from pumping plant at Milton, 55 miles; pressures 65 to 95 pounds; 200 fire hydrants, 6-inch.

CONSUMPTION

About 20,000 persons served; 3,890 taps, 110 metered, 99 of these industrial. Estimated average daily consumption 2,300,000 gallons; 1,300,000 gallons domestic.

MONTGOMERY BOROUGH, LYCOMING COUNTY

MONTGOMERY WATER COMPANY

Population 1910 census, 1,490; increase since 1900, 427. Estimated 1915, 1,700b

LOCATION

Extreme southern Lycoming County, on Susquehanna River; along Philadelphia & Reading Ry. and Sunbury Division of Pennsylvania R. R.

INDUSTRIES

Machine shops, leather novelty works and furniture factories.

WATER SUPPLY

Montgomery Water Co., incorporated 1897 for Montgomery Borough; plant built in 1898.

SOURCE AND COLLECTION

(1) Black Hole Creek; 30,000 gallon sedimentation basin, 0.5 mile west of borough, giving 4 hours subsidence; water passed through one unit mechanical filter, capacity 175,000 gallons, thence to 150,000 gallon clear water basin.

(2) Two drilled wells 230 feet deep, near creek in borough. Water not filtered.

DISTRIBUTION

By pumping from clear water basin and well directly into supply mains, with 500,000 gallon equalizing reservoir on hill on west side

of creek. Pumping installation one 155,000 gallon pump operated by 6-inch by 12-inch wheel developing 10 hp. under 4 feet head; gas engine auxiliary. Pressure about 95 pounds at pumping station.

CONSUMPTION

About 1,040 persons supplied; consumption not measured; estimated at 130,000 gallons daily.

MONTOURSVILLE BOROUGH, LYCOMING COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,904; increase since 1900, 239. Estimated 1915, 2,000a

LOCATION

Southeast of center of Lycoming County, 5 miles east of Williamsport, on Susquehanna River; on Philadelphia & Reading Ry.

INDUSTRIES

Furniture factory, three table factories, chain factory, tabourette factory, planing mills, pants factory and flour mill.

WATER SUPPLY

Municipal plant operated since 1893.

SOURCE AND COLLECTION

(1) Mountain Spring on south side of river 150 feet above low water. Water collected in 525,000 gallon reservoir; watershed area 700 acres.

(2) Dug well about 0.75 mile north of town. Water obtained by pumping; used only in dry season. Pumping installation one Knowles 800 g. p. m. pump operated by 30 hp. boiler. Pump in service about 4 months each year.

(3) In event of fire or other emergency, water from mill race by 6-inch suction to above pump.

(4) A. H. Heilman & Co. obtain water for drinking purposes at their factory from dug well. Supply can be used for borough when necessary.

DISTRIBUTION

By gravity from (1) and by pumping from (2) (3) and (4). Distributing mains as follows:

Size (inches),	10	8	6	4	3	Total
Length (miles),	0.3	1.3	1.6	3.1	0.1	6.4

Pressures 45 to 65 pounds; 54 fire hydrants, 8-inch.

CONSUMPTION

About 1,700 persons supplied; 340 taps, exclusive of manufacturing plants. Average daily consumption, based on 10 hours pumpage, 300,000 gallons. No meters.

MUNCY BOROUGH, LYCOMING COUNTY

MUNCY WATER SUPPLY COMPANY

Population 1910 census, 1,904; decrease since 1900, 30. Estimated 1915, 2,000a

LOCATION

Southeast Lycoming, County about 0.75 mile west of Susquehanna River, along Philadelphia & Reading Ry.

INDUSTRIES

In farming community; furniture factories, paint mills, woolen mills, creamery, Sproat-Waldron & Co. and Robinson Mfg. Co.

WATER SUPPLY

Muncy Water Supply Co., incorporated 1898 for Muncy Borough; purchased in 1898 the Muncy Water Co., incorporated 1889 for Muncy Borough.

SOURCE AND COLLECTION

(1) Glade Run; intake 3 miles southwest of borough; 8-inch pipe to 1,800,000 gallon distributing reservoir just south of borough. Area of watershed 1.5 square miles. Supply ample for about 9 months in year.

(2) Auxiliary supply from Susquehanna River, near Philadelphia & Reading station; filtration gallery in bed of river; 235,000 gallons per day pumped directly into mains. Pumping installation one Blake and Knowles duplex 250,000 gallon pump, one 450,000 gallon Worthington duplex pump, one 85 hp. Keeler tubular boiler.

Plans submitted December, 1913, for gravity sand filters.

DISTRIBUTION

By gravity through 10-inch main from distributing reservoir and by pumping from river; pressures 60 to 65 pounds.

Supply and distributing mains as follows:

Size (inches),	10	8	6	4	3	Total
Length (miles),	1.0	2.8	3.2	1.6	.1	8.7

Forty-four fire hydrants, all but one 4-inch.

CONSUMPTION

About 1,700 persons supplied; 375 taps. Average daily consumption, measured by pump displacement, 250,000 gallons; 65,000 gallons industrial. Twelve taps metered; 8 industrial.

PICTURE ROCKS BOROUGH, LYCOMING COUNTY

PRIVATE SUPPLY

Population 1910 census, 576; decrease since 1900, 38. Estimated 1915, 700a

LOCATION

Southeastern Lycoming County, on Muncy Creek, about 3 miles above Hughesville; along Williamsport & Northern R. R. Range in elevation 30 to 40 feet.

INDUSTRIES

Furniture manufacturing.

WATER SUPPLY

Private system built in 1895 and owned by C. W. Borrows and others.

SOURCE AND COLLECTION

Water from several springs rising in mountains north of borough, collected into 40,000 gallon reservoir; watershed area 0.5 square mile.

DISTRIBUTION

By gravity through about 2.5 miles of pipe, chiefly 2-inch; pressures 150 to 170 pounds; no fire hydrants.

CONSUMPTION

About 125 persons supplied; 30 taps. Consumption not known; assuming 30 gallons per capita, would be 3,750 gallons daily, all domestic.

WILLIAMSPORT CITY AND VICINITY, LYCOMING COUNTY

WILLIAMSPORT WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Williamsport,	31,860	3,103	33,495
S. Williamsport Boro.,	3,734	406	3,937
DuBoistown Boro.,	682	32	693
Newberry Village,			

LOCATION

South central Lycoming County, along West Branch of Susquehanna River, at mouth of Lycoming Creek; railroad center, reached by Northern Central & Sunbury Divisions of Pennsylvania R. R., Philadelphia & Reading Ry., New York Central & Hudson River R. R. and Susquehanna & New York R. R. City generally level except in northeastern section. Average elevation of mercantile district 25 feet; street elevations 18 to 82 feet above city datum, which is 496 feet above sea level.

INDUSTRIES

Leading lumber market of State; lumber, planing and silk mills; foundries, machine shops, steel works, furniture and shoe factories,

rubber works and tanneries, with products valued at $13,348,000 in 1909; lumbering and farming principal industries in district about city.

WATER SUPPLY

Williamsport and surrounding territory supplied by Williamsport Water Co., incorporated 1912 as merger of two old companies.

Company	Inc.	Incorporated for
Citizens Water & Gas Co. of Williamsport,	1865	Williamsport, Newberry & Jaysburg
Williamsport Water Co.,	1853	Williamsport

SOURCE AND COLLECTION

(1) Hagerman Run, mountain stream flowing into Susquehanna River at South Williamsport; low dam and intake 2 miles southeast of city. Water flows from intake to 500,000 gallon settling basin, thence by gravity through 24-inch pipe line 4,000 feet to 6,600,000 gallon storage reservoir. Area of watershed 4.6 square miles; heavily wooded and owned by company. Minimum flow in 1904, 400,000 gallons per day.

(2) Mosquito Creek, mountain stream flowing into Susquehanna River at DuBoistown; intake and 21,000,000 gallon storage and distributing reservoir 5 miles southwest of city. Watershed area 7.7 square miles. Minimum flow in 1914, 750,000 gallons per day.

(3) Auxiliary supply from eight dug wells on each side of Lycoming Creek, about 2 miles west of business district of city, and from two filter galleries in creek which deliver through 24-inch pipes into three of these wells. Wells 26 feet diameter dug to hardpan 30 feet below the pumps; all within 900 feet of pumping station. Supply used during dry periods or when sources (1) and (2) are frozen up. At such times Hagerman Run reservoir kept filled from this source and held in reserve for emergencies. Daily yield said to be 13,000,000 gallons. Pumping installation one 5,000,000 gallon Epping-Carpenter triplex expansion pump, one 5,000,000 gallon Knowles compound duplex pump, one 3,000,000 gallon Knowles compound duplex pump, two E. Keeler return tubular boilers, 135 hp. each, two E. Keeler return tubular boilers, 150 hp. each.

Suction lines 16-inch and 24-inch. Knowles pumps discharge into 16-inch, and Epping-Carpenter into 24-inch main, cross-connected outside station. Static head on pumps, 142 feet. Water pumped directly into mains.

DISTRIBUTION

By gravity from (1) and (2) and by pumping from (3).

From (1) 24-inch main extends 2,000 feet and branches into 16-inch, continuing 6,000 feet to city, and 8-inch supplying South Williamsport.

From (2) 24-inch main extends 4,000 feet and branches into 16-inch and 20-inch main which continue about 4 miles to distribution system; cross-connected about 1.5 miles from the 24-inch and unite 300 feet in a 24-inch main about 1.25 miles south of city; 16-inch main from (2) connects with 16-inch main from (1) near pumping station. Supply lines cross Susquehanna River in river bed. The 16-inch line broken in 1894 by flood, and 20-inch by ice jam in 1910. All are gated on each side of river. Mains as follows:

Size (inches)	Length (miles)	Per cent.
24	2.56	
20	2.56	14.5
16	7.55	
12	5.36	6.3
10	0.17	
8	9.86	11.2
6	39.06	44.6
4	18.07	20.6
¾ to 3	2.43	2.8
	Total 87.62	100.0

Total pressures 27 to 57 pounds; 316 hydrants, 4-inch to 8-inch connection to main and 4-inch to 10-inch barrels.

CONSUMPTION

About 40,000 persons supplied; 7,125 taps, 100 metered. Average daily consumption about 6,000,000 gallons; maximum of 7,000,000 gallons; about one-third industrial. No means of accurate measurement.

HISTORICAL

Williamsport Water Co., incorporated 1853 to supply Williamsport; territory extended in 1868 to include South Williamsport. Citizens water & Gas Co. of Williamsport, incorporated 1865 as the Lycoming Gas & Water Co., sold out at sheriff's sale 1878; property purchased, 1879, and reorganized as Citizens Water & Gas Co. of Williamsport, to supply Williamsport and DuBoistown boroughs and village of Newberry. The two companies merged and incorporated as Williamsport Water Co. in 1912.

SECTION No. 9

SUSQUEHANNA RIVER

MIDDLE MAIN SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

Table of Industrial Water Supplies (Coal Companies)

SECTION No. 9

SUSQUEHANNA RIVER—MIDDLE MAIN SUB-BASIN.

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section is in the central eastern part of Pennsylvania, south of the Lower West Branch and the Lower North Branch Sub-basins. Area is 1,450 square miles, covering the territory drained by the Susquehanna River below the junction of the North and West Branches, and above, but not including, the Juniata River. It is roughly triangular in shape, about 80 miles long from east to west and 35 miles wide. It includes practically all of Snyder County, large portions of Northumberland, Union, Centre, Schuylkill, and Dauphin counties, together with small portions of Columbia, Mifflin, Juniata and Perry counties.

SURFACE CHARACTERISTICS

The surface is hilly and irregular, including the ridges of the Allegheny Mountains extending east and west across the section. The river bisects the drainage area and its important tributaries are Shamokin, Penns, Mahanoy, Mahantango and Wiconisco creeks.

POPULATION

The population in 1910 was nearly 237,000, an increase of 14% since 1900. The density of population west of the Susquehanna is 40 per square mile, while east of the river it is 286 per square mile, reaching 495 in that section which lies in Schuylkill County. No borough on the west side has more than 2,500 population, but on the east side the urban population is 50%.

RESOURCES AND INDUSTRIES

In the extreme northeastern part anthracite mining is the principal industry. In the remaining portion farming is the chief industry, with lumbering next in importance. There are small manufacturing plants in the larger places.

WATER SUPPLY

The water supplies in the western half of the section are in general adequate in quality and quantity, but in the eastern end the situation

is different. Pollution by mine wastes restricts available supplies, and as mining centers are at comparatively high altitudes, the scope of gravity works is limited. The rainfall in this locality is the highest in the State, but seepage is undoubtedly augmented by coal workings. Several large communities and mining operations in this region were sufferers from the water shortage during the severe drought of 1914, water supplies having been entirely shut off for a short time morning and evening in one place, and collieries obliged to shut down or haul water in tank cars for boiler use.

Nevertheless it is worthy of note that the bulk of the public and railroad supplies is under the gravity system, while the coal mining supplies are chiefly pumped. The largest system is that of Sunbury, which normally has a gravity supply, although pumping from the Susquehanna is resorted to in emergency. The other important supplies are those of Ashland, Gilberton, Girardville, Lykens, Mahanoy City, Mt. Carmel and Williamstown.

The aggregate population served by water supply systems is over 82,000. There are 38 public supply systems, of which only those of Ashland, Center Hall and Girardville are municipally owned. These places have a combined population of over 12,000, and their consumption is more than 700,000 gallons per day. Gravity system of public supply 84%. Six systems supply more than one community the principal ones being the Wyoming Valley Water Supply Co., operating in the vicinity of Delano; the Lykens Water Co., which supplies Lykens and Wiconisco, and the Williams Valley Water Co., suppplying Williamstown and vicinity in Dauphin County. This discussion and the tabular data following omit Mahanoy City, Centralia, Mt. Carmel Township, Shamokin, Shenandoah and the Girard Estate, which lie in this section but obtain their supplies from the Lower North Branch Sub-basin, under which heading they are described. Their combined consumption, reported as 8,500,000 gallons per day, should be included in any discussion of the relation of total consumption to population.

The railroads in this section consume about 1,800,000 gallons per day, about equally divided between the public supplies and those of the roads themselves. The Philadelphia & Reading Ry. and the Pennsylvania R. R. are the chief users, with approximately equal consumption. Private industrial supplies are of relatively small importance except those of the coal companies, which use more than 2,700,000 gallons per day, most of it pumped.

The following tables give a summary of the water supplies in this section, both domestic and industrial, and are followed by descriptions of the water supply systems arranged alphabetically according to places supplied:

Place	County	Ownership or control	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Aaronsburg,	Centre, Haines Twp.,	Aaronsburg W. Co.,	450	400						1	
Ashland,	Schuylkill,	Municipal,	7,000	7,000				1			
Beaver Springs,	Snyder, Spring Twp.,	Beaver Springs W. Co.,	400	240						1	
Beavertown,	Snyder, Beaver Twp.,	Private, P. S. Bobb,	500	50b							1
Center Hall,	Centre,	Municipal,	500	475				1			
		Centre Hall W. Co.,		25			1				
Coburn,	Centre, Penn Twp.,	Coburn W. Co.,	325	250						1	
		Citizens W. Co. of Coburn,		70						1	
Delano,	Schuylkill, Delano Twp.,	Wyoming Valley W. S. Co. (Lehigh Valley W. Co.)	3,000	3,000						1	
Delano Junction,	Schuylkill, Delano Twp.,										
Park Place,	Schuylkill, Mahanoy Twp.,										
Buck Mountain,	Schuylkill, Mahanoy Twp.,										
Elizabethville,	Dauphin,	Elizabethville W. Co.,	1,050	810			1				
Frackville,	Schuylkill,	Mountain City W. Co. (David Gring & others)	3,500	1,750			1				
Fremont,	Snyder, Perry Twp.,	Private, J. Calvin Boyer,	121	90							1
Gilberton,	Schuylkill,	Anthracite W. Co. (P. & R. Coal & Iron Co.)	5,400	5,400			1				
Girardville,	Schuylkill,	Municipal,	4,750b	4,090b				1			
Gordon,	Schuylkill,	Citizens W. Co. of Gordon,	1,200	900			1				
Halifax,	Dauphin,	Halifax W. Co. (United Water & Guarantee Co.)	800b	600			1				
Hegins,	Schuylkill, Hegins Twp.,	Hegins W. Co.,	1,800	1,800b						1	
Valley View,	Schuylkill, Hegins Twp.,										
Herndon,	Northumberland,	Herndon W. Co.,	650	15b			1				
Lykens,	Dauphin,	Lykens W. Co.,	5,500	4,800			1				
Wiconisco,	Dauphin, Wiconisco Twp.,										
Madisonburg,	Centre, Miles Twp.,	Madisonburg W. Co., unine.,	176	176							1
McClure,	Snyder, West Beaver Twp.,	Purity W. Co.,	523	450						1	
Middleburg,	Snyder,	Middleburg W. Co.,	1,100	1,000			1				
Franklin,	Snyder, Franklin Twp.,										
Millersburg,	Dauphin,	Mountain Home W. Co.,	3,000	2,500			1				
Millheim,	Centre,	Millheim W. Co.,	700	650			1				
Miners State Hos., Fountain Springs	Schuylkill, Butler Twp.,	Private, State Institution,	(300)	(300)							
Mount Carmel,	Northumberland,	Mount Carmel W. Co.,	21,000	20,000			1				

OPERATING PUBLIC WATER SUPPLIES SECTION NO. 9—Continued

Place	County	Ownership or control	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
New Berlin,	Union,	Union W. Co. of New Berlin,	500	75			1				
Rebersburg,	Centre, Miles Twp.,	Rebersburg W. Co.,	300	300						1	
Richfield,	Juniata, Monroe Twp.,	Private, A. Calvin Boyer,	190	140							1
Selinsgrove,	Snyder,	Selinsgrove W. S. Co.,	1,540	1,250			1				
Smullton,	Centre, Miles Twp.,	Mutual Company, unine.,	140	140							1
Sunbury,	Northumberland,	Sunbury W. Co.,	15,660x	15,000			1				
Augusta Township (part)	Northumberland,										
Tower City,	Schuylkill,	Citizens W. Co. of Tower City,	2,400	2,200b			1				
Trevorton,	Northumberland, Zerby Twp.,	Trevorton W. S. Co.,	2,800	1,000						1	
Uniontown,	Dauphin,	Uniontown W. Co.,	300	275			1				
Wiconisco,	Dauphin, Upper Paxton Twp.,	Berry Springs W. Co.,	400	120						1	
Williamstown,	Dauphin,	Private Supply,		100					1		
Williamstown,	Dauphin,	Williams Valley W. Co.,	5,000	4,900			1				
Dayton,	Dauphin, Williams Twp.,										
Greenfield,	Dauphin, Williams Twp.,										
Woodward,	Centre, Haines Twp.,	Woodward W. Co.,	75	75						1	

bEstimated by Water Supply Commission
xU. S. census.

OPERATING PUBLIC WATER SUPPLIES SECTION NO. 9—*Continued*

Place	County	Ownership or control	Source			Method			Consumption (average daily)			
			Surf.	Ground	Comb.	Grav.	Pumped	Comb.	Domestic (gallons)	Industrial (gallons)	Total (gallons)	Per capita (gallons)
Aaronsburg,	Centre, Haines Twp.,	Aaronsburg W. Co.,	---	1	---	1	---	---	4,000a	----------	4,000a	------
Ashland,	Schuylkill,	Municipal,	---	1	---	1	---	---	500,000	20,000	520,000	74t
Beaver Springs,	Snyder, Spring Twp.,	Beaver Springs W. Co.,	1	---	---	1	---	---	25,000a	25,000a	50,000a	------
Beavertown,	Snyder, Beaver Twp.,	Private, P. S. Bobb,	1	---	---	---	1	---	----------	----------	1,500b	------
Center Hall,	Centre,	Municipal,	---	1	---	1	---	---	7,800a	4,200a	12,000a	------
		Centre Hall W. Co.,	---	1	---	1	---	---	----------	----------	750b	------
Coburn,	Centre, Penn Twp.,	Coburn W. Co.,	1	---	---	1	---	---	----------	----------	5,000a	------
		Citizens W. Co. of Coburn,	---	1	---	1	---	---	----------	----------	2,800b	------
Delano,	Schuylkill, Delano Twp.,	Wyoming Valley W. S. Co. (Lehigh Valley W. Co.)	---	---	1	---	---	1	90,000b	595,000	685,000b	------
Delano Junction,	Schuylkill, Delano Twp.,											
Park Place,	Schuylkill, Mahanoy Twp.,											
Buck Mountain,	Schuylkill, Mahanoy Twp.,											
Elizabethville,	Dauphin,	Elizabethville W. Co.,	---	1	---	1	---	---	----------	----------	38,000a	------
Frackville,	Schuylkill,	Mountain City W. Co. (David Gring & others)	---	1	---	---	1	---	----------	----------	40,000a	------
Fremont,	Snyder, Perry Twp.,	Private, J. Calvin Boyer,	---	1	---	1	---	---	----------	----------	600a	------
Gilberton,	Schuylkill,	Anthracite W. Co. (P. & R. Coal & Iron Co.)	1	---	---	1	---	---	270,000	775,000	1,045,000	194t
Girardville,	Schuylkill,	Municipal,	1	---	---	---	1	---	----------	----------	(*180,000)	------
Gordon,	Schuylkill,	Citizens W. Co. of Gordon,	---	1	---	1	---	---	----------	----------	90,000a	------
Halifax,	Dauphin,	Halifax W. Co. (United Water & Guarantee Co.)	---	---	1	---	---	1	----------	----------	24,000b	------
Hegins,	Schuylkill, Hegins Twp.,	Hegins W. Co.,	---	1	---	---	---	1	----------	----------	5,750a	------
Valley View,	Schuylkill, Hegins Twp.,											
Herndon,	Northumberland,	Herndon W. Co.,	---	1	---	1	---	---	1,000	74,000	75,000	------
Lykens,	Dauphin,	Lykens W. Co.,	1	---	---	1	---	---	500,000a	500,000a	1,000,000a	------
Wiconisco,	Dauphin, Wiconisco Twp.,											
Madisonburg,	Centre, Miles Twp.,	Madisonburg W. Co., unine.,	---	1	---	1	---	---	1,600a	----------	1,600a	------
McClure,	Snyder, West Beaver Twp.,	Purity W. Co.,	---	1	---	1	---	---	2,000a	500a	2,500a	------
Middleburg,	Snyder,	Middleburg W. Co.,	1	---	---	1	---	---	35,000a	35,000a	70,000a	------
Franklin,	Snyder, Franklin Twp.,											
Millersburg,	Dauphin,	Mountain Home W. Co.,	---	1	---	---	1	---	127,000	23,000	150,000	60t
Millheim,	Centre,	Millheim W. Co.,	1	---	---	1	---	---	5,400a	600a	6,000a	------
Miners State Hos., Fountain Springs	Schuylkill, Butler Twp.,	Private, State Institution,	---	---	---	---	---	---	----------	----------	75,000a	------
Mount Carmel,	Northumberland,	Mount Carmel W. Co.,	---	1	---	1	---	---	534,000a	66,000a	600,000a	------

OPERATING PUBLIC WATER SUPPLIES SECTION NO. 9—Continued

Place	County	Ownership or control	Source			System			Consumption (average daily)			
			Surf.	Ground	Comb.	Grav.	Pumped	Comb.	Domestic (gallons)	Industrial (gallons)	Total (gallons)	Per capita (gallons)
New Berlin,	Union,	Union W. Co. of New Berlin,	---	1	---	1	---	---	6,000a	6,000a	12,000a	------
Rebersburg,	Centre, Miles Twp.,	Rebersburg W. Co.,	---	1	---	1	---	---	5,200a	----------	5,200a	------
Richfield,	Juniata, Monroe Twp.,	Private, A. Calvin Boyer,	---	1	---	1	---	---	----------	----------	4,000b	------
Selinsgrove,	Snyder,	Selinsgrove W. S. Co.,	1	---	---	---	1	---	80,000	20,000	100,000	80t
Smullton,	Centre, Miles Twp.,	Mutual Company, unine.,	1	---	---	1	---	---	7,800a	----------	7,800a	------
Sunbury,	Northumberland,	Sunbury W. Co.,	1	---	---	---	---	1	1,320,000	1,880,000	3,200,000	213t
Augusta Twp. (part),	Northumberland,											
Tower City,	Schuylkill,	Citizens W. Co. of Tower City,	---	1	---	---	1	---	----------	----------	150,000a	------
Trevorton,	Northumberland, Zerby Twp.,	Trevorton W. S. Co.,	---	1	---	---	1	---	14,400	2,600	17,000	17t
Uniontown,	Dauphin,	Uniontown W. Co.,	---	1	---	1	---	---	----------	----------	11,000b	------
Wiconisco,	Dauphin, Upper Paxton Twp.,	Berry Springs W. Co.,	---	1	---	1	---	---	5,000a	----------	5,000a	------
Williamstown,	Dauphin,	Private supply,	---	1	---	1	---	---	4,000b	----------	4,000b	------
Williamstown,	Dauphin,											
Dayton,	Dauphin, Williams Twp.,	Williams Valley W. Co.,	1	---	---	1	---	---	375,000	125,000	500,000	102t
Greenfield,	Dauphin, Williams Twp.,											
Woodward,	Centre, Haines Twp.,	Woodward W. Co.,	---	1	---	1	---	---	----------	----------	3,000b	------

aEstimated by water companies
bEstimated by Water Supply Commission
tTotal
*(Pur. from Girard Water Co.)

RAILROAD WATER SUPPLIES, SECTION NO. 9

Station	Source of supply	Method of supply	Average daily consumption R. R.	Average daily consumption Public
LEHIGH VALLEY				
Centralia,	Wyoming Valley W. S. Co.			18,000
Mt. Carmel,	Wyoming Valley W. S. Co.			47,500
Montana,	Wyoming Valley W. S. Co.			10,700
Lost Creek,	Girard Water Co.,			22,700
PHILADELPHIA & READING				
Head of Grade,	Anthracite Water Co.,			75,000
Lykens,	Municipal,			20,000
Water Tank,	Streams,	Gravity,	10,000	
St. Nicholas,	Anthracite Water Co.,			32,000
Maple Hill,	Anthracite Water Co.,			5,200
Gilberton,	Anthracite Water Co.,			2,700
Foot Mah. Plane, Repair shops, Engine house,	Anthracite Water Co.,			127,500
Head Mah. Plane, Boilers,	Anthracite Water Co.,			37,700
Shenandoah City,	Anthracite Water Co.,			1,700
W. Shenandoah,	Anthracite Water Co.,			5,500
Gordon,	Rattling Run,	Gravity,	320,000	
Bast,	P. & R. Coal & Iron Co.,		1,100	
Potts,	P. & R. Coal & Iron Co.,		5,300	
Locust Summit,	Bear Gap Water Co.,			49,000
Mt. Carmel,	Mt. Carmel Water Co.,			2,000
Shamokin repair shops and engine house	Roaring Creek Water Co.,			110,000
Trevorton,	Spring,	Gravity,	12,000	
Herndon,	Spring,	Gravity,	3,000	
Snydertown,	Lick Run,	Pumped,	52,000	
Haas,	Shamokin Creek,	Pumped,	9,000	
NEW BERLIN AND WINFIELD				
New Berlin,	Small runs,	Gravity,	3,000	
PENNSYLVANIA				
Sunbury & Shamokin Divisions				
McClure,	Run,	Gravity,	11,200	
Paxtonville,	Run,	Gravity,	11,300	
Middleburg,	Middleburg Water Co.,			5,100
Selinsgrove,	Selinsgrove Water Co.,			2,400
New Boston,	Run,	Gravity,	12,500	
Darkwater,	Run,	Gravity,	15,500	
Shenandoah,	Shenandoah Coal, Water & Gas Co.			13,300
Shamrock,	Run,	Gravity,	16,200	
Shamokin,	Roaring Creek Water Co.,			95,300
Mt. Carmel,	Locust Mt. Water Co.,			14,900
Williamsport & Susquehanna Division				
Sunbury shops,	Sunbury Water Co.,			10,000
Sunbury, Williamsport Div.,	Sunbury Water Co.,			80,000
Sunbury, Susquehanna Div.,	Sunbury Water Co.,			44,200
Pardee,	Run,	Gravity,	10,000	
Cherry Run,	Run,	Gravity,	12,000	
Zerby,	Run,	Gravity,	10,000	
Clarks Ferry,	Susquehanna River,	Pumped,		
	Run,	Gravity,	151,000	
Millersburg,	Run,	Gravity,	200,000	
Herndon,	Herndon Water Co.,			60,000
Millersburg,	Spring,	Gravity,	13,800	
Elizabethville,	Spring,	Gravity,		
Lykens,	Run,	Gravity,	25,000	
Totals,			903,900	892,400

INDUSTRIAL WATER SUPPLIES, SECTION NO. 9 (MISCELLANEOUS COMPANIES)

Does not Include all the Smaller Companies

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product
				Domestic	Industrial	
Dalmatia, Northumberland County,	Susquehanna Stone Co.:					
	Siding No. 4,	Susquehanna River,	Pumped,		s7,000	400 tons
	Siding No. 5,	Drilled well,				
Loyalton, Dauphin County,	Kessler's Distillery,	Spring,	Gravity,	3,000b (100 pop.)		
Mahanoy City, Schuylkill County,	Chas. B. Kaier Brewing Co.,	Broad Mountain Water Co	1,500,000 gal. res.; gravity,		10,000	
Total from private systems,				3,000	17,000	

sWater for steam purposes.

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
Dauphin County							
Short Mountain,	Summit Branch Min. Co. (Susquehanna Coal Co.)						
	Colliery,	Bear Creek (Aux.)	Gravity,		w		
		Lykens Water Co.,			s(365,000)	1,350	1
	Washery,	Wiconisco Creek,	Pumped,		w 750,000		
		Lykens Water Co.,			s (40,000)	225	1
Williamstown,	Summit Branch Min. Co. (Susquehanna Coal Co.)						
	Colliery,	Budds Spring and two small dams on Berry Mountain	1,000,000 gal. res., pumped,		s 700,000	1,385	1
	Washery,	Budds Spring and two small dams on Berry Mountain			w 28,000	235	1
Northumberland County							
Dunkleberger,	Trevorton Colliery Co.,	Mahanoy Creek,	Pumped,		s 48,000	510	1
Excelsior,	The Enterprise Coal Co.,	Artesian wells,	Pumped,		w 130,000	733	1
					s 130,000		
	Excelsior Coal Co.,	Mountain springs,	300,000 gal. res., gravity,	10,000 (450 pop.)	s 80,000	815	1
		Roaring Creek Water Co.,					
Schuylkill County							
Buck Mt.,	The Lehigh Valley Coal Co.,	Wyoming Creek Water Supply Co.					
		Drilled wells,	Pumped,	6,000 (200 pop.)	s 9,000	1,030	1
Girardville,	M. R. McTurk Coal Co.,	8-inch bore hole,	Air lift,		s 24,000	449	1
		Mountain stream,	Gravity,		s (31,000)		
		Girard Water Co.,					
	Lehigh Valley Coal Co.,	See separate description under Delano					
Mahanoy Plane,	Harleigh-Brookwood Coal Co. (Madeira Hill & Co.) Stanton Colliery	Artesian wells,	Pumped to 2,000,000 gallon reservoir		s 195,000	603	1
Raven Run,	Girard Mammoth Coal Co.,	Raven Run,	Three 40,000 gal. dams. Gravity		s 100,000	806	1
		Girard Water Co.,					
Shaft,	Susquehanna Coal Co.,	Girard Water Co.,		29,000 (1700 pop.)	s(140,000)	1,235	1

INDUSTRIAL WATER SUPPLIES, SECTION NO. 9 (COAL MINING COMPANIES)—Continued

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
Shenandoah,	Thomas Colliery Co. Madeira Hill & Co.)						
	Kohley's Run Colliery,	Kohley's Run,	Small dams, gravity,		s 150,000	1,041	1
Tower City,	Philadelphia & Reading Coal & Iron Co. (W. Brookside Coll.)	Wiconisco Creek,	Pumped,		350,000	1,251	1
Total from private systems,				45,000	2,694,000		

sWater for steam purposes
wWater for washing coal

AARONSBURG (HAINES TWP.), CENTRE COUNTY

AARONSBURG WATER COMPANY

Estimated population, 450a

LOCATION

Southeastern Centre County, 1 mile east of Millheim.

INDUSTRIES

Agriculture; planing mill.

WATER SUPPLY

Supplied since 1809 by Aaronsburg Water Co., incorporated 1844 for Aaronsburg.

SOURCE AND COLLECTION

Three springs, 0.75 mile north of village, in small gap in mountains; water piped to 1,600 gallon concrete reservoir, 100 feet south of springs and 385 feet above village. Drainage area 0.4 square mile. Water soft.

DISTRIBUTION

By gravity through 1 mile of 6-inch main from reservoir to village; pressures 150 to 175 pounds; 13 fire hydrants, 2½-inch.

CONSUMPTION

About 90% of entire population supplied. Average daily consumption, 4,000 gallons. No means of measuring.

ASHLAND BOROUGH, SCHUYLKILL COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 6,855; increase since 1900, 417. Estimated 1915, 7,000

LOCATION

Northern Schuylkill County, along Columbia County line; on Philadelphia & Reading Ry.

INDUSTRIES

Mining town, two foundries, shirt factory, two screen manufacturing plants and two planing mills.

WATER SUPPLY

Municipal plant built in 1877.

SOURCE AND COLLECTION

Mountain springs rising along south side of Little Mahanoy Creek, about 5 miles southeast of borough. Water collected into reservoirs in bed of Little Mahanoy Creek, creek water being carried around them; combined storage 8,000,000 gallons. Elevation of reservoirs 1,261 and 1,235; borough 1,000. In dry seasons, when supply from spring fails, water from creek turned into reservoirs. Watershed area 49 acres. Water soft.

DISTRIBUTION

By gravity; distributing mains as follows:

Size (inches),	12	10	8	6	4	3	Total
Length (miles),	5.5	0.5	0.25	2.0	2.0	0.5	10.75
Per cent.,	(	58	)	19	19	4	100

Pressures 35 to 165 pounds; 62 fire hydrants, of which 44 are 4-inch and 18 are 6-inch.

CONSUMPTION

About 7,000 persons supplied; 1,209 taps, 11 industrial. Average daily consumption, by weir and meter measurement, 520,000 gallons; maximum 620,000 gallons; 74 gallons per capita; industrial 20,000 gallons, all metered.

COST AND REVENUE

Original cost of works about $68,000; annual operating expenses, $11,990; gross revenue (1913), $11,870.

PROPOSED

Plans being prepared for developing additional supply.

BEAVER SPRINGS (SPRING TWP.), SNYDER COUNTY

BEAVER SPRINGS WATER COMPANY

Estimated population, 400a

LOCATION

West center Snyder County, on Middle Creek, tributary of Susquehanna River; on Lewistown Division of Pennsylvania R. R.

INDUSTRIES

Farming, wagon factory, whip handle factory and creamery.

WATER SUPPLY

Beaver Springs Water Co., incorporated 1904 for Beaver Springs.

SOURCE AND COLLECTION

Small dam at junction of Three Springs Run, 1.5 miles southeast of village; 22,800 gallon reservoir adjoining; watershed area about 2 square miles. Water soft.

DISTRIBUTION

By gravity through 16-inch main from reservoir, reducing to 8-inch at village. Total length of distributing mains 3 miles; pressures 70 to 80 pounds; 10 fire hydrants, 6-inch and 4-inch.

CONSUMPTION

About 60% of population supplied through 80 taps; also two farms along pipe line. Consumption 50,000 gallons daily, 50% domestic. No means of measurement.

BEAVERTOWN (BEAVER TWP.), SNYDER COUNTY

PRIVATE SUPPLY

Estimated population 1915, 500

LOCATION

Western Snyder County; on Lewistown Division of Pennsylvania R. R.

INDUSTRIES

Two shirt factories, carriage works, work glove factory, tannery, electric light plant and planing mill.

WATER SUPPLY

Private supply owned and operated by P. S. Bobb.

SOURCE AND COLLECTION

Hydraulic ram, on mountain spring run flowing through village, pumps to wooden tank in Mr. Bobb's house.

DISTRIBUTION AND CONSUMPTION

Four houses, a hotel and shirt factory supplied from tank. Other rams on this run supply planing mill, electric light plant and tannery (when in operation). Consumption not known; assuming 30 gallons per capita and 50 persons supplied, would be 1,500 gallons daily.

CENTER HALL BOROUGH, CENTRE COUNTY

MUNICIPAL WATER WORKS

CENTER HALL WATER COMPANY

Population 1910 census, 500; increase since 1900, 37. Estimated 1915, 500

LOCATION

Southern Centre County; on Tyrone Division of Pennsylvania R. R.

INDUSTRIES

Agriculture; planing mill, grist mill, saw mill and creamery.

WATER SUPPLY

(1) Municipal plant installed in 1898 furnishes principal supply.

(2) Center Hall Water Co., incorporated 1858 for Center Hall; supplied borough until 1898 when their customers gradually went over to municipal supply, leaving about five families now supplied by company.

MUNICIPAL WATER WORKS

SOURCE AND COLLECTION

Four springs, three of them 0.75 mile northeast of borough on mountainside; water collected in 300,000 gallon reservoir near three springs; a 2-inch line from other spring 1 mile northeast. Water soft.

DISTRIBUTION

By gravity through mains as follows:

	12	10	8	6	4	2	Total
Size (inches),							
Length (miles),	(	0.1)	0.2	1.0	0.3	0.3	1.9

Pressures 75 to 85 pounds; 15 fire hydrants, 4-inch.

CONSUMPTION

About 475 persons supplied; 300 taps, a number outside borough limits. Stated average daily consumption about 12,000 gallons, 65% domestic and 35% industrial. No means of measurement.

COST AND REVENUE

Total cost of works, $15,000; annual operating expenses, $150; gross revenue, $700.

CENTER HALL WATER COMPANY

SOURCE AND COLLECTION

Spring 1 mile northwest of borough; water piped to 6,000 gallon wooden reservoir. Water soft.

DISTRIBUTION

By gravity through 0.5 mile of 4-inch pipe from reservoir to borough; pressure about 90 pounds; no fire hydrants. All former pipe lines closed excepting main line.

CONSUMPTION

About 25 persons supplied. Consumption not known; assuming 30 gallons per capita, would be about 750 gallons daily.

CENTRALIA BOROUGH, AND ARISTES, BYRNESVILLE AND WILBURTON (CONYNGHAM TWP.), COLUMBIA COUNTY

WYOMING VALLEY WATER SUPPLY CO.

Source of supply is Lower North Branch, Susquehanna River Sub-basin, Section No. 5 (q. v.).

COBURN (PENN TWP.), CENTRE COUNTY

COBURN WATER COMPANY
CITIZENS WATER COMPANY OF COBURN

Estimated 1915 population, 325

LOCATION

Southeastern Centre County, 3 miles south of Millheim; on Lewisburg and Tyrone Division of Pennsylvania R. R.

INDUSTRIES

Grain handling company, creamery and two grist mills.

WATER SUPPLY

(1) Coburn Water Co., incorporated 1900, furnishing principal supply.

(2) Citizens Water Co. of Coburn, incorporated 1901 for Coburn village.

COBURN WATER COMPANY

SOURCE AND COLLECTION

A 15,000 gallon reservoir on small mountain stream south of Coburn; watershed area 400 acres. Water soft.

DISTRIBUTION

By gravity through 2 miles of 8-inch main, reducing to 5-inch and 4-inch, principally 4-inch, from reservoir to village; pressures 54 to 60 pounds; 10 fire hydrants, 3-inch.

CONSUMPTION

About 250 persons supplied; 20 taps. Stated average daily consumption 5,000 gallons. No means of measurement.

CITIZENS WATER COMPANY OF COBURN

SOURCE AND COLLECTION

Five springs rising 1,650 feet north of village, on mountainside, 7,500 gallon reservoir encloses one spring, the four others being piped to it; drainage area about 75 acres. Water soft.

DISTRIBUTION

By gravity through 1 mile 2½-inch line from reservoir to village; pressure 38 pounds; no fire hydrants.

CONSUMPTION

Fifteen families; 22 taps, one along pipe line outside village. No means of measuring consumption; assuming 40 gallons per capita, would be about 2,800 gallons daily.

DELANO AND NEIGHBORING VILLAGES, SCHUYLKILL COUNTY

WYOMING VALLEY WATER SUPPLY COMPANY
(Lehigh Valley Coal Co.)

Estimated 1915 population of Delano, Delano Junction, Park Place and Buck Mountain, 3,000

LOCATION

Northeastern Schuylkill County, at headwaters of North Branch Mahanoy Creek; along Lehigh Valley R. R., Mahanoy and Hazleton Division.

INDUSTRIES

Mines and villages of Lehigh Valley Coal Co. in Mahanoy Township; yards, shops and villages of Lehigh Valley R. R. Co. in Delano Township.

WATER SUPPLY

Delano Water Co., incorporated 1901; leased in 1910 to Wyoming Valley Water Supply Co., incorporated 1900 for Luzerne County. Domestic supply to villages; industrial supply to Lehigh Valley R. R. Co. at Delano, Delano Junction and Park Place, to Lehigh Valley Coal Co. at Park Place, and to Buck Mountain collieries, Mahanoy Township. Delano and Delano Junction are in Section No. 3, but source of supply being in Section No. 9, they are described here. Wyoming Valley Water Supply Co., subsidiary of Lehigh Valley Coal Co., described under Hazleton, Section No. 5 (q. v.).

SOURCE AND COLLECTION

Four small streams forming headwaters of North Branch Mahanoy Creek. Reservoir No. 1, elevation 1,748, capacity 6,130,000 gallons, about 0.5 mile north of Delano, fed by small stream and by 8-inch artesian well, yielding 100 gallons per minute; watershed area 75 acres. Reservoir No. 2, elevation 1,744, capacity 21,450,000 gallons, about 0.5 mile below source of small tributary entering at Park Place, fed by small stream and springs in vicinity; also connected by 6-inch line with Mahanoy City Water Co.'s pumping main from Messers Run; watershed area 100 acres. Reservoir No. 3, elevation 1,789, capacity 35,560,000 gallons, about 0.25 mile below source of small tributary entering at Park Place, fed by small stream and by two 8 inch and one 10-inch bore holes, yielding 300 gallons per minute; watershed area 173 acres. Reservoir No. 4, elevation 1,670, capacity 200,000 gallons, about 0.5 mile northeast of Park breaker, fed by small stream and springs; watershed area 118 acres. At times of drought springs and creeks feeding reservoirs dry up.

Two 25 hp. Moore oil engines, capacity 150 g. p. m. each, connected to Ingersoll-Rand air compressors, pump from deep wells at reservoirs Nos. 1 and 3. Water soft.

DISTRIBUTION

By gravity, mains as follows:

Size (inches),	12 and 10	8	6	4	3	1 to 2	Total
Length (miles),	0.2	1.6	4.0	0.6	2.7	1.5	10.6
Per cent.,	(17	)	38	6	25	14	100

Pressures 20 to 150 pounds; 19 fire hydrants, 2 are 3-inch and 17 are 2½-inch.

Reservoir No. 1 serves Delano, Delano Junction and Lehigh Valley R. R. there; other three reservoirs serve Park Place and Buck Mountain, and Park and Buck Mountain collieries of Lehigh Valley Coal Co.

CONSUMPTION

About 3,000 persons and various industries supplied; 568 taps. Average daily industrial consumption (1913), 595,000 gallons, metered. Domestic consumption not known; assuming 30 gallons per capita, would be 90,000 gallons, giving total consumption of 685,000 gallons daily.

ELIZABETHVILLE BOROUGH, DAUPHIN COUNTY

ELIZABETHVILLE WATER COMPANY

Population 1910 census, 1,039; increase since 1900, 201. Estimated 1915, 1,050a

LOCATION

Northern Dauphin County, on north slope of Berry Mountain and south side of Wiconisco Creek Valley; rolling land draining to two streams; 9 miles above Millersburg; on Pennsylvania R. R., Northern Central Division.

INDUSTRIES

Planing mill, wagon and carriage works, stone works, hosiery mill and shirt factory.

WATER SUPPLY

Elizabethville Water Co., incorporated 1889 for Elizabethville Borough. A few private wells and springs on mountainside.

SOURCE AND COLLECTION

Ground Spring at headwaters of Armstrong Creek, tributary to Susquehanna River; intake southeast of borough on Broad Mountain; watershed area 2 square miles. A 6-inch gravity main, 4 miles long, to distributing reservoir, near borough, receives flow of two springs on Berry Mountain. Water soft.

DISTRIBUTION

By gravity through 0.8 mile 8-inch, 1.2 miles 6-inch and 2 miles 4-inch distributing mains; pressures 80 to 110 pounds; 23 fire hydrants.

CONSUMPTION

About 810 persons supplied; 200 connections. Stated average daily consumption about 38,000 gallons. No means of measurement.

FRACKVILLE BOROUGH, SCHUYLKILL COUNTY

THE MOUNTAIN CITY WATER COMPANY
(D. Gring and others)

Population 1910 census, 3,118; increase since 1900, 524. Estimated 1915, 3,500

LOCATION

Western Schuylkill County, at headwaters of Mud Run and Little Mahanoy Creek; on Broad Mountain overlooking Mahanoy Valley; along Philadelphia & Reading Ry.

INDUSTRIES

Shirt factory; inhabitants principally miners.

WATER SUPPLY

The Mountain City Water Co., incorporated 1883 for Frackville Borough; owned and operated by David Gring and others.

SOURCE AND COLLECTION

Three 8-inch drilled wells, about 400 feet deep within borough limits; 216,000 gallon compressed air pump at wells forces water to 500,000 gallon distributing reservoir on hill back of borough.

DISTRIBUTION

By gravity through 8-inch main; pressure 65 pounds.

CONSUMPTION

About 50% of population supplied through 350 taps. Stated average daily consumption 40,000 gallons. No means of measurement.

FREMONT (MOUNT PLEASANT MILLS) (PERRY TWP.), SNYDER COUNTY

PRIVATE SUPPLY

Estimated population 1915, 121

LOCATION

Southeast of central Snyder County, on west bank of north branch of Mahantango Creek; also known as Mount Pleasant Mills. Farming district.

WATER SUPPLY

Private system operated by J. Calvin Boyer since 1905.

SOURCE AND COLLECTION

A 3,400 gallon reservoir on small spring 1,000 feet southwest of village; minimum flow 600 gallons daily. Water medium hard.

DISTRIBUTION

By gravity through 0.25 mile of 4-inch main from reservoir to village; pressures 10 to 27 pounds; no fire hydrants.

CONSUMPTION

About 90 persons supplied; 19 taps. Average daily consumption 600 gallons. No means of measurement.

GILBERTON BOROUGH, SCHUYLKILL COUNTY

ANTHRACITE WATER COMPANY

Population 1910 census, 5,401; increase since 1900, 1,028. Estimated 1915, 5,400a

LOCATION

Northern Schuylkill County, on Mahanoy Creek; along Pennsylvania R. R., Schuylkill Division, and Philadelphia & Reading Ry.

INDUSTRIES

Mines and villages of Philadelphia & Reading Coal and Iron Co.

WATER SUPPLY

Anthracite Water Co., incorporated 1882 for Mahanoy Township, Schuylkill County; controlled by Philadelphia & Reading Coal and Iron Co. (See New Philadelphia, Section No. 3.) Domestic and industrial supplies to Gilberton Borough, Yatesville and St. Nicholas; industrial supplies to Frackville Borough, Knickerbocker, Ellangowan, Maple Hill, St. Nicholas, Suffolk, Boston Run, Draper, Gilberton, Brighton, Brookwood, Bear Ridge and Stanton collieries, and Mahanoy Plane power house.

SOURCE AND COLLECTION

(1) Waste House Run, tributary Mahanoy Creek, 2.5 miles northeast of Shenandoah; watershed area 0.64 square miles. Three reservoirs, as follows:

Reservoirs	Location	Capacity gallons	Elevation feet
Upper,	0.5 mile below source,	45,000,000	
Middle,	1 mile below source,	61,000,000	
Lower,	just below middle,	800,000	1,528

(2) Mud Run, tributary Mill Creek, 1 mile south of Frackville and 4 miles southwest of Shenandoah; 202,700,000 gallon reservoir 1 mile below source, at elevation 1,523; watershed area 0.73 square mile. Water soft.

DISTRIBUTION

By gravity; two sources connected; 12- and 8-inch pipes from Waste House Run and two 10-inch lines from Mud Run; 8-inch line to Shenandoah; 12-inch line reducing to 10-inch and 8-inch, to Maizeville. One 10-inch line from Mud Run direct to Mahanoy Plane, reducing to 6-inch. Other 10-inch line, reduced to 8-inch, joins Waste House Run 8-inch line at Maizeville. Distributing mains as follows:

Size (inches),	8	6	4	3	Total
Length (miles),	1.66	3.56	2.50	0.98	8.70
Per cent.,	19	41	(40)		100

Pressures 78 to 163 pounds; 51 fire hydrants, 4-inch, 3-inch, and 2-inch.

CONSUMPTION

About 5,400 persons served; 1,200 taps. Average daily consumption about 1,045,000 gallons; maximum 1,200,000 gallons; 26% domestic and 74% industrial; determined from depth of water in reservoirs

and from tank measurement at collieries. Five taps metered, all industrial. Metered consumption 254,000 gallons daily.

PROPOSED NEW SOURCES

Reservoirs on north and south forks of West Branch of Little Schuylkill River, intake dams on Neifert Creek and at mouth of Pine Creek. Pump station at mouth of Locust Creek, and distributing reservoir at top of Broad Mountain, near Vulcan Colliery of Lehigh Valley Coal Co.

PROPOSED DISTRIBUTION

Gravity main from reservoirs on Little Schuylkill River to intake dams, to pumps. Force main up Pine Creek and Hosensock Creek Valley to distributing reservoir, elevation 1,688. Gravity main to Mahanoy Creek Valley.

GIRARD ESTATE, COLUMBIA AND SCHUYLKILL COUNTIES

THE GIRARD WATER COMPANY

Source of supply in lower North Branch, Susquehanna River Subbasin, Section No. 5 (q. v.).

GIRARDVILLE BOROUGH, SCHUYLKILL COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 4,396; increase since 1900, 730. Estimated 1915, 4,750b

LOCATION

Mahanoy Valley coal district, Butler Township, Schuylkill County.

WATER SUPPLY

Borough owns distribution system and buys water from The Girard Water Co. (See "Girard Estate," section No. 5.)

DISTRIBUTION

By gravity; 22 fire hydrants.

CONSUMPTION

About 800 families supplied; 500 taps. Average daily consumption about 180,000 gallons, included in total for Girard Estate, Section No. 5.

PROPOSED

The Girardville Water Co., incorporated 1909 for Girardville Borough, is constructing a water works system, pumping from storage reservoir on West Branch of Rattling Run. When it is completed this company will furnish entire supply to Girardville Borough and take over municipal distributing system.

GORDON BOROUGH, SCHUYLKILL COUNTY

CITIZENS WATER COMPANY OF GORDON, PA.

Population 1910 census, 1,185; increase since 1900, 20. Estimated 1915, 1,200

LOCATION

In angle of junction of Little Mahanoy Creek with Mahanoy Creek, in Schuylkill County; on Philadelphia & Reading Ry.

WATER SUPPLY

Citizens Water Co. of Gordon, Pa., incorporated 1894; successors to Hadesty Water Co., incorporated 1888.

SOURCE AND COLLECTION

Big Spring, rising on south side of Broad Mountain, 1 mile northeast of borough, collected in small concrete reservoir. Water soft.

DISTRIBUTION

By gravity through 1 mile of 4-inch main from reservoir to borough and 2.6 miles of 1- to 6-inch (principally 4-inch) mains in borough; 11 fire hydrants 4½-inch.

CONSUMPTION

About 900 persons supplied; 200 taps. Average daily consumption estimated 90,000 gallons.

HALIFAX BOROUGH, DAUPHIN COUNTY

HALIFAX WATER COMPANY
(United Water and Guarantee Company)

Population 1910 census, 745; increase since 1900, 127. Estimated 1915, 800b

LOCATION

Northwestern Dauphin County, on Susquehanna River; on Pennsylvania R. R., Northern Central Division.

INDUSTRIES

Two shoe factories, broom factory, chair seat factory.

WATER SUPPLY

Halifax Water Co., incorporated 1897 for Halifax Borough; controlled by United Water and Guarantee Co.

SOURCE AND COLLECTION

Large spring on Peter's Mountain, 4 miles south, draining into Powell Creek, tributary of Susquehanna River, 5 miles south of Halifax; water by 3-inch gravity pipe into 200,000 gallon distributing reservoir at borough.

Additional source Etzweilers Run, branch of Powell Creek. A 10 hp. Stickney gasoline engine and 4x6 Dean triplex pump installed for use when supply from Peter's Mountain is insufficient. Supply treated with hypochlorite.

DISTRIBUTION

By gravity through 1.4 miles mains, 0.8 mile 6-inch and 0.6 mile 4-inch, pressure about 60 pounds.

CONSUMPTION

About 600 persons served through 132 taps. No means of measuring consumption; assuming 40 gallons per capita, would be 24,000 gallons daily. Two hundred have private dug wells. Water for boilers of manufacturing plants from private wells.

HEGINS AND VALLEY VIEW, SCHUYLKILL COUNTY

HEGINS WATER COMPANY

Estimated 1915 population, 1,800

LOCATION

Southwestern Schuylkill County, between Pine and Deep creeks, in Mahantango Creek drainage basin; in Lykens Valley coal district.

WATER SUPPLY

Hegins Water Co., incorporated 1909 for Hegins Township.

SOURCE AND COLLECTION

(1) Spring in sandstone, north side of Bear Mountain, 3.5 miles from Hegins; water flows 100 feet to intake reservoir, 40,000 gallons capacity.

(2) Emergency cold spring in sandstone, 2,000 feet northeast and 260 feet below reservoir. Steam pump with vertical boiler has 2-inch suction and 1¼-inch discharge to reservoir.

(3) When necessary, will construct 1,000,000 gallon storage reservoir near present intake dam.

DISTRIBUTION

By gravity through 8-inch main north 6,000 feet; lines east and west to Hegins and Valley View; distributing pipes 4-inch to 6-inch. Total length of all pipes 6 miles; pressure 85 pounds.

CONSUMPTION

Supply through 115 taps, all metered. Average daily consumption 5,750 gallons, all domestic.

HERNDON BOROUGH, NORTHUMBERLAND COUNTY

HERNDON WATER COMPANY

Population 1910 census, 620. Estimated 1915, 650a

LOCATION

Southwestern Northumberland County, on east bank of Susquehanna River, 12 miles below Sunbury; on Northern Central Division of Pennsylvania R. R.

INDUSTRIES

Saw mill, door and sash mill, silk mill and electric light plant.

WATER SUPPLY

Herndon Water Co., incorporated 1906 for Herndon Borough.

SOURCE AND COLLECTION

Three springs forming source of small tributary of Fidlers Run, 2 miles south of borough; watershed area 10 square miles; 35,000 gallon reservoir near springs. Water soft.

DISTRIBUTION

By gravity through 1.5 miles 6-inch mains; pressures 40 to 65 pounds; no fire hydrants.

CONSUMPTION

A hotel, two private houses and Northern Central Division of Pennsylvania R. R. the only users; two taps. Average daily consumption, measured by meter, 75,000 gallons, 99% industrial and 1% domestic. A few houses have small supply from spring in a ravine back of borough; remainder use private wells.

KULPMONT (MT. CARMEL TWP.), NORTHUMBERLAND COUNTY

KULPMONT WATER COMPANY
(BEAR GAP WATER COMPANY)

Source of supply is in Lower North Branch, Susquehanna River Sub-basin, Section No. 5 (q. v.).

LYKENS BOROUGH AND WICONISCO (WICONISCO TWP.), DAUPHIN COUNTY

LYKENS WATER COMPANY

(Lykens Valley Coal Co.)

	Population 1910 census	Increase since 1900	Estimated 1915
Lykens,	2,943	181	3,000
Wiconisco,			2,500

LOCATION

Northern Dauphin County, on Wiconisco Creek.

INDUSTRIES

Mining town; terminus of Lykens Valley Branch of Pennsylvania R. R.; Williams Valley Branch of Philadelphia & Reading Ry., and Schuylkill and Dauphin Traction line. At Lykens, a brewery, three hosiery mills, foundry and paper box factory, tap and reamer works, gas plant. At Wiconisco, Short Mountain colliery, hosiery mill and dye works, electric light power plant.

WATER SUPPLY

Lykens Water Co., incorporated 1883 for Lykens Borough, subsidiary of Lykens Valley Coal Co. Pennsylvania R. R. formerly purchased from this company, but now obtains own supply from Rattling Creek, below the company's intake. Philadelphia & Reading Ry. purchases small quantities.

SOURCE AND COLLECTION

Rattling Creek, at junction of East and West Branches in Broad Mountain district, 1 mile south of Lykens and 3 miles below intake of Williams Valley Water Co.; small intake reservoir, elevation 806 and capacity 500,000 gallons; 19.1 square miles uninhabited watershed.

DISTRIBUTION

A 12-inch main north 1,300 feet, then 10-inch to Lykens, 6,200 feet, and 8-inch from Lykens north 3,400 feet to pumping station No. 1, in western end of Wiconisco. At this station water forced through two mains, 5-inch and 8-inch, northeasterly to three tanks, each 50,000 gallons capacity, for supply of Short Mountain colliery. Branching

off southeasterly from these force mains is a 10-inch line for supply of high service territory in Wiconisco, covering about two-thirds of village; pressure 30 to 60 pounds.

At times of heavy drought pumping station No. 2, at low point in line between Lykens and Station No. 1, used as auxiliary. A branch main northeasterly direct from Lykens furnishes gravity supply for low service in remaining third of Wiconisco Village. Pressures in Lykens 30 to 65 pounds.

Installation of pumping station No. 1, one 1,500,000 gallon Griscom duplex pump, one 1,000,000 gallon Cameron pump. Installation of pumping station No. 2, two 575,000 gallon Cameron pumps.

Total length of distributing mains (exclusive of supply mains from reservoir to pumps) as follows:

Size (inches),	8	6	5	4	3	2½	2	1½	1¼	1	Total
Length (miles),	0.43	0.61	0.38	2.17	3.65	0.07	0.10	0.13	0.35	0.26	8.15
Per cent.,	(	17		) 27	45	(		11		)	100

Twenty-nine fire hydrants in Lykens, 4-inch and 3-inch.

CONSUMPTION

Population supplied 4,800; 531 taps in Lykens, 291 in Wiconisco. Average daily consumption (1913) 1,000,000 gallons; maximum 1,500,000; 50% industrial, 35% domestic and 15% public; 13 meters for large consumers, such as hotels and industrial establishments.

MADISONBURG (MILES TWP.), CENTRE COUNTY

MADISONBURG WATER COMPANY

Estimated population, 176a

LOCATION

Eastern Centre County, western end of Miles Township; in farming section.

WATER SUPPLY

Madisonburg Water Co., unincorporated, in operation more than 70 years.

SOURCE AND COLLECTION

Spring 600 feet northwest of village. Water soft.

DISTRIBUTION

By gravity through 1 mile of 3-inch, reducing to 1½-inch, main from spring to village; pressures 50 to 60 pounds; no fire hydrants.

CONSUMPTION

Entire population supplied through 43 taps, 50% having water piped into houses, remainder public hydrants. Stated daily consumption 1,600 gallons, all domestic. No means of measurement.

MAHANOY CITY, SCHUYLKILL COUNTY

MAHANOY CITY WATER COMPANY

Principal source of supply Lower North Branch of Susquehanna River, Sub-basin Section No. 5 (q. v.).

MARION HEIGHTS BOROUGH, NORTHUMBERLAND COUNTY

MARION HEIGHTS WATER COMPANY
(Bear Gap Water Company)

Source of supply Lower North Branch of Susquehanna River Sub-basin, Section No. 5 (q. v.).

McCLURE (WEST BEAVER TWP.), SNYDER COUNTY

PURITY WATER COMPANY

Estimated population, 523a

LOCATION

Southwestern corner of Snyder County; on Lewiston Division of Pennsylvania R. R.

INDUSTRIES

Furniture factory, broom works, shirt factory, saw and planing mill and portable house works.

WATER SUPPLY

Purity Water Co., incorporated 1904 for McClure.

SOURCE AND COLLECTION

Three springs on Shade Mountain, 0.25 mile south of village, collected into 4,000 gallon reservoir; watershed area 0.25 square mile. Water soft.

DISTRIBUTION

By gravity through 1 mile 6-inch main from reservoir to village, and through 1.5 miles 4-inch main in village; pressures 65 to 70 pounds; 13 fire hydrants, 3-inch.

CONSUMPTION

About 450 persons supplied; 65 taps. Stated average daily consumption 2,500 gallons, 20% industrial. No means of measurement.

MIDDLEBURG BOROUGH AND FRANKLIN VILLAGE (FRANKLIN TWP.), SNYDER COUNTY

MIDDLEBURG WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Middleburg,	531	18	700a
Franklin,			400a

LOCATION

North of center Snyder County (Middleburg county seat), on Middle Creek; on Lewistown Division of Pennsylvania R. R.

INDUSTRIES

Farming community; shirt factory, tannery and planing mill.

WATER SUPPLY

Middleburg Water Co., incorporated 1903 for Middleburg Borough.

SOURCE AND COLLECTION

Intake dam on Erb Run, tributary of Middle Creek, 0.75 mile from borough. Company owns 800 acres on Shade Mountain, controlling Erb, Bowersox and Distillery runs, the two latter held in reserve in case of necessity for larger supply; total area of watershed about 1,200 acres. Water soft.

DISTRIBUTION

Four-inch main from small intake dam to 360,000 gallon concrete reservoir on hill 1.5 miles south of borough; 8-inch main reducing to 6-inch, to Franklin and Middleburg. Distributing mains 6 miles, 3.5 miles 6-inch and 2.5 miles 4-inch; pressures 85 to 105 pounds; 16 fire hydrants, 4-inch.

CONSUMPTION

About 1,000 persons supplied; 200 taps. Average daily consumption 70,000 gallons; maximum 75,000; 50% domestic and 50% industrial. Two industrial supplies metered, consumption 35,000 gallons daily, tannery using 30,000 gallons and Pennsylvania R. R. 5,000 gallons.

MILLERSBURG BOROUGH, DAUPHIN COUNTY

MILLERSBURG HOME WATER COMPANY

Population 1910 census, 2,394; increase since 1900, 719. Estimated 1915, 3,000a

LOCATION

Western Dauphin County, at mouth of Wiconisco Creek, Susquehanna River, on Northern Central Division of Pennsylvania R. R. Lykens Valley R. R. to Lykens.

INDUSTRIES

Railroad junction; two shoe factories, tap and dye works, reamer factories, planing mills, broom factories, fifth wheel works.

WATER SUPPLY

Millersburg Home Water Co., incorporated 1890 for Millersburg.

SOURCE AND COLLECTION

Six springs on Berry Mountain—drainage area 4 square miles—and three drilled wells in valley; minimum flow of springs 25,000 gallons, wells 300,000 gallons per day. Water from springs flows by gravity to receiving basin at a water power pumping station operated by Wiconisco Creek, about 2.5 miles from its mouth, and thence pumped into storage reservoir near Millersburg. Water soft. In summer, when springs are depleted, water pumped by compressed air and deep well pump from wells into receiving basin.

Pumping installation: No. 32 Downie deep well pump; 7x8 Smith-Vaile pump (triplex); 8½x10 Smith-Vaile triplex pump; 10x10 air compressor; 35 hp. Morgan-Smith waterwheel; 15 hp. Nash gasoline engine; 50 hp. Fairbanks-Morse producer gas engine and producer gas outfit.

DISTRIBUTION

By gravity from storage reservoir; mains as follows:

Size (inches),	8	6	4	1 to 2	Total
Length (miles),	0.5	4.5	4.0	0.5	9.5
Per cent.,	53		42	5	100

Pressures 65 to 75 pounds; 40 fire hydrants, 4-inch.

CONSUMPTION

About 2,500 persons supplied; 750 taps. Consumption measured by pump displacement, 150,000 gallons daily, maximum 165,000 gallons; 85% domestic and 15% industrial.

MILLHEIM BOROUGH, CENTRE COUNTY

MILLHEIM WATER COMPANY

Population 1910 census, 625; increase since 1900, 14; estimated 1915, 700

LOCATION

Southeastern Centre County, on Elk Creek, branch of Penn Creek, tributary of Susquehanna River. Nearest railroad station at Coburn, 2 miles south.

INDUSTRIES

Hosiery mill, foundry and machine shops, two planing mills and two grist mills.

WATER SUPPLY

Millheim Water Co., incorporated 1903 for Millheim Borough.

SOURCE AND COLLECTION

A 250,000 gallon reservoir, 150 feet above borough on Phillips Run, tributary of Elk Creek 1.5 miles north of borough; watershed area about 1 square mile. Water soft.

DISTRIBUTION

Through 1.75 miles of 4-inch main from reservoir to borough; 1 mile of 4-inch laterals; pressures 50 to 60 pounds; 22 fire hydrants, 4-inch. It is proposed to increase 4-inch supply main to 8-inch for fire protection.

CONSUMPTION

About 650 persons supplied; 125 taps. Stated average daily consumption about 6,000 gallons; 90% domestic and 10% industrial. No means of measurement.

MINERS STATE HOSPITAL, FOUNTAIN SPRINGS, SCHUYLKILL COUNTY

STATE INSTITUTION SYSTEM

Approximate population, 300a

LOCATION

Northwest Schuylkill County, 1 mile south of Ashland.

WATER SUPPLY

Institution system installed about 1896. Water from small stream on property of Commonwealth, purchased from Albert Thompson. Water not required by hospital may be used by Mr. Thompson (under purchase agreement) after it passes State property line on north.

SOURCE AND COLLECTION

A 2,250,000 gallon intake dam on Bright Run, tributary of Little Mahanoy Creek, rising in Broad Mountain, 3 miles from hospital and about 94 feet above it; watershed area 204 acres, with no flow during very dry seasons. Supply during droughts obtained from small spring on property adjoining State's land. Water of good quality. More storage needed.

DISTRIBUTION

By gravity. No fire hydrants.

CONSUMPTION

Stated consumption 75,000 gallons per day. No means of measurement.

MT. CARMEL BOROUGH, NORTHUMBERLAND COUNTY

MT. CARMEL WATER COMPANY

Population 1910 census, 17,532; increase since 1900, 4,353. Estimated 1915, 21,000.

LOCATION

Eastern Northumberland County on Pennsylvania R. R.; Sunbury & Mt. Carmel Branch of Philadelphia & Reading Ry., and Mahanoy and Hazleton Division of Lehigh Valley R. R.

INDUSTRIES

Coal mining; shirt factory, cigar factory, knitting factory, silk mill, planing mill, iron works and brewery; gas plant, packing house and locomotive supply.

WATER SUPPLY

Mt. Carmel Water Co., incorporated 1883 for Mt. Carmel. About 3 months in year, or in case of increased demand, supply from Bear Gap Water Co. or Wyoming Valley Water Supply Co.; frequent purchases necessary.

SOURCE AND COLLECTION

Group of springs and three wells connected to reservoirs Nos. 1 and 2, just south of borough; capacity of each reservoir 3,000,000 gallons. Reservoir No. 1 is 20 feet higher than reservoir No. 2. Wells 1,-300 feet deep. Water pumped by 3-inch air-line from Ingersoll Rand air compressor in pump house near borough limits. Reservoirs Nos. 3 and 4 east of borough, in Shamokin Creek valley. Reservoir No. 3, capacity 500,000 gallons, supplied by group of springs. Reservoir No. 4, capacity 3,000,000 gallons, 3,200 feet east of No. 3, supplied by group of springs. Bore holes at these two places have long been abandoned.

DISTRIBUTION

Reservoirs Nos. 3 and 4 discharge into 8-inch supply main to borough, extending east and connecting with Wyoming Valley Water Supply Co.'s main near Columbia County line. Reservoir No. 2 connects by 10-inch gravity main to borough. Average pressure 58 pounds. Total mains as follows

Size (inches),	18	10	8	6	4	2	Total
Length (miles),	0.02	0.82	3.35	1.80	9.90	0.11	16.00
Per cent.,	(5)		21	11	62	1	100

Seventy-eight fire hydrants, 4-inch.

CONSUMPTION

About 20,000 persons served; 4,000 taps, 801 metered; average daily consumption 600,000 gallons, 89% domestic and 11% industrial. An average of 57,100 gallons daily purchased from Bear Gap Water Co. No mines supplied by this system.

NEW BERLIN BOROUGH, UNION COUNTY

UNION WATER COMPANY OF NEW BERLIN

Population 1910 census, 527; decrease since 1900, 98. Estimated 1915, 500.

LOCATION

Southern Union County, on north bank of Penns Creek; western terminus of New Berlin & Winfield R. R.

INDUSTRIES

Farming community; saw mill and planing mill.

WATER SUPPLY

Union Water Co. of New Berlin, incorporated 1907 for New Berlin Borough.

SOURCE AND COLLECTION

Bolton spring on hillside 0.5 mile north of borough; daily flow about 20,000 gallons; 8-inch pipe leads from spring to 20,000 gallon reservoir.

DISTRIBUTION

By gravity through 8-inch main; pressure about 50 pounds; 0.1 mile of 3-inch and 2-inch distributing mains; no fire hydrants.

CONSUMPTION

About 75 persons served, 15 taps. Stated average daily consumption 12,000 gallons; 50% domestic. No means of measurement. Railroad also obtains supply from creek flowing into Susquehanna at Winfield.

HISTORICAL

Company was chartered mainly for railroad, which it supplied prior to incorporation

REBERSBURG (MILES TWP.), CENTRE COUNTY

REBERSBURG WATER COMPANY

Estimated population, 300a

LOCATION

Eastern Centre County, 3 miles south of Clinton County line. Farm-region.

WATER SUPPLY

Rebersburg Water Co., incorporated 1896 for Rebersburg.

SOURCE AND COLLECTION

From spring, 1 mile south of Rebersburg; 4-inch pipe leads 65 feet to 9,600 gallon reservoir; drainage area about 2 square miles. Water soft.

DISTRIBUTION

By gravity through 10-inch main reducing to 6-inch and 4-inch; total length 1 mile; pressure 85 pounds; 14 fire hydrants, 8-inch.

CONSUMPTION

Entire population supplied; 70 taps. Stated daily consumption about 5,250 gallons, all domestic. No means of measurement.

RICHFIELD (MONROE TWP.), JUNIATA COUNTY

PRIVATE SUPPLY

Estimated population, 190a

LOCATION

Extreme northeastern Juniata County, on south bank of west branch of Mahantango Creek.

INDUSTRY

Shirt factory.

WATER SUPPLY

Private system of J. Calvin Boyer.

SOURCE AND COLLECTION

Three springs at headwaters of Trout Creek, 1.5 miles northwest of village in West Perry Township, Snyder County; flow 45,000 gallons daily into 4,500 gallon collecting basin. Water soft.

DISTRIBUTION

By gravity through 1.3 miles 4-inch wooden main; pressure about 85 pounds; no fire hydrants.

CONSUMPTION

About 140 persons supplied; 48 taps. No means of measuring consumption; but assuming 30 gallons per capita, would be 4,000 gallons daily. Forty-nine private dug wells and two drilled wells.

SELINSGROVE BOROUGH, SNYDER COUNTY

SELINSGROVE WATER SUPPLY COMPANY

Population 1910 census, 1,473; increase since 1900, 147. Estimated 1915, 1,540a

LOCATION

Eastern Snyder County, on west bank of Susquehanna River; along Lewistown Division of Pennsylvania R. R.

INDUSTRIES

Farming community; planing mill, silk mill and shoe factory. Seat of Susquehanna University.

WATER SUPPLY

Selinsgrove Water Supply Co., incorporated 1901 for Selinsgrove Borough.

SOURCE AND COLLECTION

Pumping station on Penns Creek near center of borough; water lifted into sedimentation basin by a centrifugal pump, 10-inch discharge, connected to reciprocating engine. Water treated with sulphate of alumina and allowed to stand 3 to 7 days, then forced through

8-inch main into distributing system by 1,000,000 gallon compound duplex pump built by Scranton Steam Pump Company and by a 500,000 gallon Knowles compound duplex pump (for emergency). Pumping installation two Keeler return tubular boilers 80 hp. each. Excess water backs up into 1,200,000 gallon reservoir on hill 1 mile west of pumping station. Water medium hard.

DISTRIBUTION

Distributing system connected with reservoir by 12-inch main reducing to 8-inch. Distributing mains as follows:

Size (inches),	8	6	4	1.25 to 3	Total
Length (miles),	1.4	2.4	1.9	0.1	5.8

Pressures 57 to 100 pounds; 40 fire hydrants, 4-inch.

CONSUMPTION

About 1,250 persons supplied; 249 taps. Average daily consumption, measured by pump displacement, 100,000 gallons; 80% domestic, 20% industrial.

Susquehanna University uses a considerable amount and Pennsylvania R. R. a small amount daily.

HISTORICAL

Selinsgrove Water Supply Co. was incorporated 1885 as The Selinsgrove Water Co., reorganized in 1901 after a sheriff's sale.

SHAMOKIN BOROUGH AND COAL TOWNSHIP, NORTHUMBERLAND COUNTY

THE ROARING CREEK WATER COMPANY

Source of supply Lower North Branch of Susquehanna River Sub-basin, Section No. 5 (q. v.).

SHENANDOAH BOROUGH, SCHUYLKILL COUNTY

MUNICIPAL WATER WORKS

Source of supply Lower North Branch of Susquehanna River Sub-basin, Section No. 5 (q. v.).

SMULLTON (MILLS TWP.), CENTRE COUNTY

PRIVATE SUPPLY

Estimated population 1915, 140a

LOCATION

Eastern Centre County, at foot of northern slope of Brush Mountain; on Elk Creek, tributary of Penn Creek.

INDUSTRIES

Farming community; creamery, printing house.

WATER SUPPLY

Since 1908, an unincorporated system forming a mutual company, every inhabitant in village being a shareholder.

SOURCE AND COLLECTION

Intake dam on spring run, about 0.5 mile south of village in mountains; watershed area 1 square mile. About 300 feet above is intake of Rebersburg Water Co. Water soft.

DISTRIBUTION

By gravity through about 0.5 mile of 2-inch, 3-inch and 4-inch mains, principally 2-inch; pressure 30 pounds; no fire hydrants.

CONSUMPTION

Entire population supplied; 50 taps. Stated daily consumption about 7,800 gallons, all domestic. No means of measurement.

SUNBURY BOROUGH AND AUGUSTA TOWNSHIP, NORTHUMBERLAND COUNTY

SUNBURY WATER COMPANY

Population of Sunbury, 1910 census, 13,370; increase since 1900, 3,960. Estimated 1915, 15,660x

LOCATION

Western Northumberland County (Sunbury county seat), on east bank of Susquehanna River, just below junction of North and West Branches; on Northern Central Division of Pennsylvania R. R.

INDUSTRIES

Offices and shops of several divisions of Pennsylvania R. R.; silk and woolen mills, dye works, foundries, table factory, bakeries, flour mills, brush factory, ice and ice cream factory, two coffin factories.

WATER SUPPLY

Sunbury Water Co., incorporated 1883 for Sunbury Borough. (1) Main supply from Little Shamokin Creek. (2) In case of drought, auxiliary supply from Susquehanna River. Domestic supply filtered.

SOURCE AND COLLECTION

(1) Dam on Little Shamokin Creek, 1 mile east of borough, forming impounding reservoir No. 1, capacity 2,750,000 gallons. Opposite, on east bank of creek, reservoirs Nos. 2 and 3, capacities, 2,180,000 and 1,900,000 gallons respectively. Below dam, on west bank, reservoirs Nos. 4 and 5; No. 4, capacity 16,510,000 gallons, and No. 5, capacity 26,670,000 gallons. Watershed area 29 square miles. Water soft.

Main pumping station No. 1, west of reservoirs 1, 2 and 3 and south of reservoirs Nos. 4 and 5, contains five pumps and three boilers, latter consisting of one 250 hp. Keeler water tubular and one 80 hp. return tubular boilers; two Worthington centrifugal pumps of 4,000,000 gallons each, with 18-inch suction from a 16,000 gallon well, raise raw water through 16-inch main to 50,000 gallon sedimentation basin. Water flows to another sedimentation basin of 80,000 gallons capacity and then to mechanical filter having ten units; combined capacity 5,000,000 gallons per day.

These filters discharge into 130,000 gallon clear water basin under eight of filters. Water taken from basins and forced to 5,000,000 gallon regulating reservoir on hillside through 10-inch and 12-inch discharge main (10-inch discharge to be replaced as soon as possible with a 20-inch line) by one 4,000,000 gallon Laidlow-Dunn-Gordon compound condensing duplex pump and a 3,000,000 gallon compound condensing Barr duplex pump. Laidlaw-Dunn-Gordon pump connects to basin with 18-inch suction, and 3,000,000 gallon Laidlaw-Dunn-Gordon and 3,000,000 gallon Barr pump connect with 16-inch suction. As town consumes only about 4,000,000 gallons daily, these pumps are used alternately. (Company contemplates addition of new machinery.)

(2) Auxiliary supply from Susquehanna River; watershed area 18,500 square miles. Water medium hard. Pumping station No. 2 on west bank, at foot of Penn Street, in borough. A 24-inch pipe 1,700 feet long extends from filter crib on west side of river to east bank, connecting to two 16-inch lines of 230 feet each through embank-

ment and under Front Street to pumping station No. 2, where 6,000,000 gallon Jeanesville centrifugal pump connected to a 250 hp. Curtis steam turbine forces water through 16-inch main to settling reservoirs on creek.

Additional equipment of station 275 hp. Keeler water tubular boiler; Blake-Knowles feedwater heater; Bulkley injector condenser; small engine and centrifugal pump furnishing water to condenser.

DISTRIBUTION

By gravity through 20-inch main from regulating reservoir discharging into 16-inch and 20-inch line to distributing system in borough. Supply and distributing mains as follows:

Size (inches)	Length (miles)	Per cent
1	6.54	25.2
2	0.26	
3	0.46	
4	7.61	26.6
6	2.51	8.8
8	3.84	13.4
10	1.58	26.0
12	1.68	
16	2.33	
20	1.50	
24	0.32	
	Total 28.57	100

Pressures 55 to 90 pounds; 88 fire hydrants, 41 are 4-inch and remainder generally $5\frac{1}{2}$-inch to $7\frac{5}{8}$-inch.

CONSUMPTION

About 15,000 persons served; 2,349 taps in borough and 25 in Augusta Township. Average daily consumption (1913), 3,200,000 gallons, 1,880,000 industrial and 1,320,000 domestic; maximum 4,200,000 gallons. Consumption determined by pump displacement and by metering industrial and commercial service.

TOWER CITY BOROUGH, SCHUYLKILL COUNTY

THE CITIZENS WATER COMPANY OF TOWER CITY

Population 1910 census, 2,325; increase since 1900, 158. Estimated 1915, 2,400.

LOCATION

Extreme western Schuylkill County, in valley between Big Lick and Peter's mountains.

INDUSTRIES

Mining; a number of small industrial plants.

WATER SUPPLY

The Citizens Water Co. of Tower City, incorporated 1893 for Tower City.

SOURCE AND COLLECTION

Springs rising on north side of Stony Mountain, 2 miles south of borough; water collected in small basin and pumped to reservoir on Peter's Mountain, 1 mile south of borough. Pump capacity 600,000 gallons daily.

DISTRIBUTION

By gravity through 6-inch main; pressure 82 pounds.

CONSUMPTION

Average daily consumption 150,000 gallons or 68 gallons per capita.

INDUSTRIAL

The Brookside colliery of the Philadelphia & Reading Coal & Iron Co. at Tower City supplied under charter of Good Spring Water Co., described in Section No. 12, under Good Spring.

A dam across Wiconisco Creek south of borough forms a small reservoir, allowing coal dirt in water to settle. Water pumped to colliery.

TREVERTON (ZERBE TWP.), NORTHUMBERLAND COUNTY

TREVORTON WATER SUPPLY COMPANY

Estimated population, 2,800a

LOCATION

North of center Northumberland County, on both sides of steep, narrow valley of Zerbe Run, tributary of Mahanoy Creek; along Herndon Branch of Philadelphia & Reading Ry.

INDUSTRIES

Coal mining town; silk mill, powder works and saw mill,

WATER SUPPLY

Treverton Water Supply Co., incorporated 1906 for Zerbe Township. Coal Co. and industries have private supplies.

SOURCE AND COLLECTION

Four springs flowing out of Mahanoy Mountain, 1 mile below and west of village, along south side of Philadelphia & Reading Ry. From three of these water flows through 6-inch tiles to another spring enclosed by a stone basin 6 feet square; pipe line of 6-inch tiling, 1 mile long, leads to a collecting basin on Zerbe Run, east of and above town, with pump house adjoining. Basin 20 feet in diameter, 16 feet in depth, with drilled well at bottom discharging 30,000 gallons per day. A 250 g. p. m. Deane pump with 6-inch suction and 6-inch main, opperated by 12-foot overshot water wheel, pumps water from basin into mains; 15 hp. gasoline engine auxiliary. Water soft.

DISTRIBUTION

Water forced directly into mains, surplus going into 450,000 gallon storage reservoir on mountainside back of village. Distributing mains, 3.15 miles 6-inch and 0.35 mile 8-inch, 1½ and 1-inch; 20 fire hydrants, 4-inch.

CONSUMPTION

About 1,000 persons served; 119 taps. Average daily consumption, measured by pump displacement, 17,000 gallons; 85% domestic and 15% industrial.

UNIONTOWN BOROUGH, DAUPHIN COUNTY

UNIONTOWN WATER COMPANY OF DAUPHIN CO.

Population 1910 census, 291; decrease since 1900, 68. Estimated 1915, 300a

LOCATION

Extreme northern Dauphin County, on Mahantango Creek. The smallest borough in Dauphin county, also known as Pillow. Agricultural community.

WATER SUPPLY

Uniontown Water Co. of Dauphin County, incorporated 1851 for Uniontown and Pillow; next to Harrisburg, the oldest water supply system in county; also smallest, and smallest town to receive public supply.

SOURCE AND COLLECTION

Four springs about mile south of center of borough, which drain into tributary of Wiconisco Creek; one spring about 0.5 mile west of borough, draining into Mahantango Creek; watershed area, each source, 1 square mile. Water collected into distributing reservoir at elevation 50 feet above town. Water soft.

DISTRIBUTION

By gravity through 2½-inch pipe from south of town, through 3-inch pipe from west of town; 9 miles distributing mains, 60% 1½-inch and 40% 3-inch and 6-inch; pressures 10 to 25 pounds; no fire hydrants.

CONSUMPTION

About 275 persons supplied; 71 taps. No means of measuring consumption; assuming 40 gallons per capita, would be 11,000 gallons per day.

WICONISCO (UPPER PAXTON TWP.), DAUPHIN COUNTY

BERRY SPRINGS WATER COMPANY

Estimated population, 400a

LOCATION

Western boundary Dauphin County, across Wiconisco Creek from Millersburg Borough; along Northern Central Division of Pennsylvania R. R.

WATER SUPPLY

Berry Springs Water Co., incorporated 1909 for Upper Paxton Township.

SOURCE AND COLLECTION

Berry Springs on hillside, 0.25 mile south of village. Water piped to 25,000 gallon distributing reservoir.

DISTRIBUTION

By gravity through 1.3 miles of mains; 0.66 miles 3-inch, 0.47 miles $1\frac{1}{4}$-inch and balance 4-inch and $1\frac{1}{2}$-inch; 3-inch main from reservoir to village; pressure 30 pounds; no fire hydrants.

CONSUMPTION

About 120 persons supplied; 73 taps; stated consumption about 5,000 gallons daily, entirely domestic. No means of measurement.

WILLIAMSTOWN BOROUGH, DAYTON AND GREENFIELD (WILLIAMS TWP.), DAUPHIN COUNTY

WILLIAMS VALLEY WATER COMPANY

	Population 1910 census	Decrease since 1900	Estimated 1915
Williamstown,	2,904	30	3,200a
Dayton and Greenfield,			1,800a

LOCATION

Northeastern corner Dauphin County, along Wiconisco Creek, 20 miles east of Millersburg. Dayton lies just west of Williamstown, and Greenfield just east. Along Summit Branch of Pennsylvania R. R. and Wiconisco Valley Branch of Philadelphia & Reading Ry.

INDUSTRIES

Principally mining; two hosiery mills.

WATER SUPPLY

In borough and two villages by Williams Valley Water Co., incorporated 1892 for Williamstown Borough, and Dayton and Greenfield Water Co.; incorporated 1907 for Williams Township and now leased by former company.

SOURCE AND COLLECTION

Small intake dams on east branch of Rattling Creek and its tributary, the Nine O'Clock Branch, 3 miles southwest of borough. Water from Nine O'Clock Branch intake flows by short open trench into

East Branch intake a short distance above junction of two. From this intake water flows by gravity through about 1 mile of wood stave pipe to 150,000 gallon storage and distributing reservoir at head of small stream flowing into Wiconisco Creek 1 mile below Williamstown. Water medium hard.

DISTRIBUTION

By gravity from reservoir through 2.4 miles of 12-inch, reducing to 10-inch and 8-inch, mains to distributing system. Distributing mains as follows

Size (inches),	8	6	4	Total
Length (miles),	1.3	1.5	5.0	7.8

Pressures 110 to 135 pounds; 35 fire hydrants, 5-inch.

CONSUMPTION

About 4,900 persons supplied. Average daily consumption, determined by pressure tests, 500,000 gallons; maximum 600,000 gallons; 25% industrial.

PRIVATE SUPPLY

Independent system supplies 20 families from spring rising out of hillside above town. A 180,000 gallon reservoir over this spring connected to borough. No means of measuring consumption; assuming 40 gallons per capita, would be 4,000 gallons daily, domestic.

ELEVATIONS

Rattling Creek intake, 1,153 ft.; Big Lick Reservoir, 1,075 ft.; Main Street, Williamstown, 721 ft.; Broad Street, highest point, 810 ft.; abandoned distributing reservoir, 928 ft.

WOODWARD (HAINES TWP.), CENTRE COUNTY

WOODWARD WATER COMPANY

Estimated 1915 population, 75

LOCATION

Eastern Centre County, on south bank of Pine Creek.

INDUSTRIES

Farming section; distillery.

WATER SUPPLY

Woodward Water Co., incorporated 1872 for Woodward.

SOURCE AND COLLECTION

Spring 0.5 mile south of village, on mountainside; two 3-inch pipes to 200 gallon reservoir. Flow of spring said be constant.

DISTRIBUTION

By gravity through 3-inch main from reservoir to village; pressure about 85 pounds.

CONSUMPTION

Supply to 27 families through taps, and 4 families from street hydrants. Assumed daily consumption 3,000 gallons.

SECTION No. 10

SUSQUEHANNA RIVER

UPPER JUNIATA SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

Table of Industrial Water Supplies (Coal Companies)

SECTION No. 10

SUSQUEHANNA RIVER—UPPER JUNIATA SUB-BASIN.

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section, in the central southern part of the State, includes the watersheds of the Raystown and Frankstown branches of the Juniata, above their intersection, near Huntingdon, and comprises all of Blair County, the larger portion of Huntingdon and Bedford counties, and small parts of Centre, Cambria, Somerset and Fulton. It is roughly rectangular in shape, and covers 2,001 square miles, or 4.4% of the State, being about 55 miles long in a northerly and southerly direction and 35 miles wide.

SURFACE CHARACTERISTICS

The sub-basin lies on the western edge of the Allegheny Mountain region, its westerly boundary being the so-called "Allegheny Front." Within it are wide valleys and high ridges extending generally from south to north. Limestone outcrops in the western valleys. Large areas are forested, although the best timber has been removed. The State has here a growing forest reserve. Important tributaries of the Juniata River are Dunning, Yellow, Little Juniata and Standing Stone creeks.

POPULATION

The population of the section in 1910 was nearly 167,000, an increase of 18% over 1900. While there is only one city, the proportion of urban population reaches 45% and the density of population is 83 per square mile.

RESOURCES AND INDUSTRIES

The mineral resources include large limestone deposits and the Broad Top coal in Huntingdon and Bedford counties. Manufacturing is carried on along the railroads, especially in the Pennsylvania R. R. shops at Altoona; blast furnaces and other iron works are fairly numerous, and the section is the second in the State in its developed water power. Agriculture flourishes in the valleys.

WATER SUPPLY

The supply of water is, in general, ample for the population, although the city of Altoona has at times suffered from shortage. The quality is excellent from the industrial standpoint, and pollution is comparatively small. Consumption is greatest at Altoona, Tyrone and on the Pennsylvania R. R. Most of the public systems supply surface water by gravity, but private industrial supplies are mostly pumped, and the railroads are furnished extensively by both methods.

The aggregate population served by water supply systems is more than 99,000. Of 28 public supplies 11 are municipal. The city of Altoona is the largest user, with a supplied population of 55,500 and a consumption of 5,200,000 gallons per day. Tyrone and Huntingdon, with an aggregate consumption of over 2,830,000 gallons per day, are supplied by water companies. The Allegheny Water Co. supplies several suburbs of Altoona. The Saxton Water Co. supplies East Saxton and Stonertown.

The railroad consumption is more than 7,900,000 gallons per day, chiefly on the Pennsylvania R. R. lines, nearly all the supply being furnished by the company or its subsidiaries. The principal consumption is at East Altoona, Hollidaysburg and Tyrone. The greater part of the Pennsylvania supply comes from the Blair Gap Water Co., using Blair Gap Run south of Altoona. The Tipton Water Co. uses Tipton Run, a stream west of Tyrone.

The private industrial supplies are not very important, except that of the Home Electric Light and Steam Heat Co. at Tyrone.

The following tables give a summary of the water supplies in this section, both domestic and industrial, after which are detailed descriptions of the water supply systems arranged alphabetically according to places supplied:

Place	County	Company	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Alexandria,	Huntingdon,	Alexandria W. Co.,	450	600			1				
Altoona,	Blair,	Municipal,	60,000	55,500		1					
	Blair,	*The Allegheny W. Co.,		500							
Altoona, suburbs of—											
Lakemont,	Blair, Logan Twp.,										
Lakemont Terrace,	Blair, Logan Twp.,										
Llyswen,	Blair, Logan Twp.,	The Allegheny W. Co.,	2,580b	1,800						1	
South Altoona,	Blair, Logan Twp.,										
South Lakemont,	Blair, Allegheny Twp.,										
Sylvan Hills,	Blair, Allegheny Twp.,										
Baltzell's Ext.,	Blair, Logan Twp.,	Private—Theo. Baltzell,		280							1
Green's Ext.,	Blair, Logan Twp.,	Green Hill W. Co.,		25						1	
Lander's Ext.,	Blair, Logan Twp.,	Private—W. A. Lander,		225							1
Roselawn Addition,	Blair, Logan Twp.,	Roselawn W. Co.,		200						1	
Antis Twp., vicinity of Bellwood	Blair,	Bellwood W. W. Co.,	225b	225						1	
Bedford,	Bedford,	Municipal,	2,300b	2,500				1			
Bedford Twp. (part),		Private—four hotels,		(700)							
Bellwood,	Blair,	Municipal,	2,500	2,200				1			
Birmingham,	Huntingdon,	Private,	200	275					1		
Blair,	Blair, Logan Twp.,	Home W. S. Co.,	175	150						1	
Blair County Home and Hospital for Insane	Blair, Allegheny Twp.,	Private,	(425)	(425)							
Duncansville,	Blair,	Municipal,	1,500	1,500				1			
Everett,	Bedford,	Everett W. Co.,	2,000	1,000			1				
Gaysport,	Blair,	Municipal,	950	550				1			
Greenwood,	Blair, Logan Twp.,	Private—J. M. Hutchinson,	400	350							1
Hollidaysburg,	Blair,	Municipal,	4,600	4,500				1			
Hopewell,	Bedford,	Private,	600b	20					1		
Huntingdon,	Huntingdon,	Huntingdon W. S. Co.,	7,000	7,000			1				
Juniata,	Blair,	Municipal,	6,500	6,000				1			
Manns Choice,	Bedford,	Private,	350b	160b					1		
Martinsburg,	Blair,	Municipal,	1,400	1,300				1			
Pennsylvania Industrial Reformatory	Huntingdon, Oneida Twp.,	Private—State institution,	(800)	(800)							

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 10—Continued

Place	County	Company	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Rainsburg,	Bedford,	Municipal,	200	200				1			
Roaring Spring,	Blair,	Municipal,	2,200	2,200				1			
Saxton,	Bedford,	Saxton W. Co.,	1,400	1,400			1				
East Saxton,	Bedford, Liberty Twp.,										
Stonertown,	Bedford, Liberty Twp.,										
Tyrone,	Blair,	Tyrone Gas & W. Co.,	7,500	7,000			1				
Warriors Mark,	Huntingdon, Warriors Mark Twp.,	Warriors Mark W. Co.,	195	195						1	
Williamsburg,	Blair,	Municipal,	1,800b	1,800				1			

*Listed under Altoona- suburbs of
bEstimated by Water Supply Commission

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 10—*Continued*

Place	County	Company	Supply: Source: Surface	Supply: Source: Ground	Supply: Source: Combined	Supply: Method: Gravity	Supply: Method: Pumped	Supply: Method: Combined	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Alexandria,	Huntingdon,	Alexandria W. Co.,	1	---	---	1	---	---	18,000b	30,000a	48,000b	------
Altoona,	Blair,	Municipal,	1	---	---	1	---	---	5,166,500	33,500	5,200,000	94t
	Blair,	*The Allegheny W. Co.,	---	---	---	---	---	---	------	------	------	------
Altoona, suburbs of—												
Lakemont,	Blair, Logan Twp.,	The Allegheny W. Co.,	1	---	---	1	---	---	148,000a	1,053,000a	1,201,000a†	------
Lakemont Terrace,	Blair, Logan Twp.,											
Llyswen,	Blair, Logan Twp.,											
South Altoona,	Blair, Logan Twp.,											
South Lakemont,	Blair, Allegheny Twp.,											
Sylvan Hills,	Blair, Allegheny Twp.,											
Baltzell's Ext.,	Blair, Logan Twp.,	Private—Theo. Baltzell,	---	1	---	---	1	---	11,200b	------	11,200b	------
Green's Ext.,	Blair, Logan Twp.,	Green Hill W. Co.,	---	1	---	---	1	---	1,000	------	1,000	40d
Lander's Ext.,	Blair, Logan Twp.,	Private—W. A. Lander,	---	1	---	---	1	---	9,000b	------	9,000b	------
Roselawn Addition,	Blair, Logan Twp.,	Roselawn W. Co.,	---	1	---	---	1	---	12,000	------	12,000	60d
Antis Twp., vicinity of Bellwood	Blair,	Bellwood W. W. Co.,	1	---	---	1	---	---	6,800b	------	6,800b	------
Bedford,	Bedford,	Municipal,	---	1	---	---	---	1	75,000b	52,000b	127,000b	------
Bedford Twp. (part),		Private—four hotels,	---	---	---	---	---	---	40,000b	------	40,000b	------
Bellwood,	Blair,	Municipal,	1	---	---	1	---	---	66,500a	3,500a	70,000a	------
Birmingham,	Huntingdon,	Private,	---	1	---	---	---	1	31,200b	------	31,200b	------
Blair,	Blair, Logan Twp.,	Home W. S. Co.,	---	1	---	1	---	---	5,000a	------	5,000a	------
Blair County Home and Hospital for Insane	Blair, Allegheny Twp.,	Private,	---	---	---	---	---	---	75,000a	------	75,000a	------
Duncansville,	Blair,	Municipal,	1	---	---	1	---	---	6,000a	------	6,000a	------
Everett,	Bedford,	Everett W. Co.,	---	1	---	---	1	---	95,000	5,000	100,000	100t
Gaysport,	Blair,	Municipal,	1	---	---	1	---	---	30,000a	10,000a	40,000a	------
Greenwood,	Blair, Logan Twp.,	Private—J. M. Hutchinson,	---	1	---	1	---	---	10,500b	------	10,500b	------
Hollidaysburg,	Blair,	Municipal,	1	---	---	1	---	---	342,000a	18,000a	360,000a	------
Hopewell,	Bedford,	Private,	1	---	---	---	1	---	1,000b	------	1,000b	------
Huntingdon,	Huntingdon,	Huntingdon W. S. Co.,	1	---	---	---	1	---	759,000	75,000	834,000	119t
Juniata,	Blair,	Municipal,	1	---	---	1	---	---	288,000a	12,000a	300,000a	------

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 10—Continued

Place	County	Ownership or Control	Supply: Source: Surf.	Supply: Source: Ground	Supply: Source: Comb.	Supply: Method: Grav.	Supply: Method: Pumped	Supply: Method: Comb.	Consumption (average daily): Domestic (gallons)	Consumption (average daily): Industrial (gallons)	Consumption (average daily): Total (gallons)	Consumption (average daily): Per capita (gallons)
Manns Choice,	Bedford,	Private,	---	1	---	1	---	---	1,000b	------	1,000b	------
Martinsburg,	Blair,	Municipal,	1	---	---	1	---	---	27,000a	3,000a	30,000a	------
Pennsylvania Industrial Reformatory	Huntingdon, Oneida Twp.,	Private—State institution,	---	---	---	---	---	---	270,000a	------	270,000a	------
Rainsburg,	Bedford,	Municipal,	1	---	---	1	---	---	6,000b	------	6,000b	------
Roaring Spring,	Blair,	Municipal,	1	---	---	1	---	---	60,000a	10,000a	70,000a	------
Saxton,	Bedford,	Saxton W. Co.,	1	---	---	1	---	---	22,800a	74,600a	97,400a	------
East Saxton,	Bedford, Liberty Twp.,											
Stonertown,	Bedford, Liberty Twp.,											
Tyrone,	Blair,	Tyrone Gas & W. Co.,	1	---	---	1	---	---	1,800,000a	200,000a	2,000,000a	------
Warriors Mark,	Huntingdon, Warriors Mark Twp.,	Warriors Mark W. Co.,	---	1	---	1	---	---	3,900b	------	3,900b	------
Williamsburg,	Blair,	Municipal,	1	---	---	1	---	---	60,000a	140,000a	200,000a	------

aEstimated by water companies.
bEstimated by Water Supply Commission.
dDomestic.
tTotal.
*Listed under Altoona—suburbs of.
†Includes supply to 500 persons in Altoona.

RAILROAD WATER SUPPLIES, SECTION NO. 10

EAST BROAD TOP

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Coles,	Spring,	Gravity,		
	Well,	Pumping,	10,000	
Robertsdale,	Rockhill Iron & Coal Co.,			25,000

HUNTINGDON & BROAD TOP MOUNTAIN

Dudley,	Springs,	Gravity,	11,250	
Fishers Summit,	Fisher Spring,	Gravity,	20,000	
Hopewell—Sandy Run Jct.,	Juniata River,	Pumped,	2,666	
Kimbers Run,	Spring,	Gravity,	6,000	
Long Siding,	Huntingdon W. Co.,			39,915
Marklesburg,	Boyer Spring,	Gravity,	14,500	
Minersville,	Millers Run,	Gravity,	340	
Mt. Dallas,	Juniata River,	Pumped,	14,500	
Riddlesburg,	Colonial Iron Co.,	Pumped,	16,850	
Sandy Run Branch,	Spring,	Gravity,	6,000	
Saxton river bridge,	Juniata River,	Pumped,	9,000	
Saxton round house,	Saxton W. Co.,			10,000
Saxton shops,	Saxton W. Co.,			6,000
Saxton, upper yard,	Saxton W. Co.,			49,000
Shultz's,	Shultz Spring,	Gravity,	500	

PENNSYLVANIA

Middle Division				
Huntingdon,	Juniata River,	Pumped,	100,000	
Warrior Ridge No. 1,	Spring,	Pumped,	190,000	
Warrior Ridge No. 2,	Spring,	Pumped,	176,000	
Spruce Creek,	Juniata River,	Pumped,		
	Spring,	Gravity,	55,000	
Tyrone "RM,"	Juniata River,	Pumped,		
	Tipton W. Co.,			
Tipton,	Tipton W. Co.,		132,000	
Bellwood 2 track pans,	Bells Run,	Gravity,	186,000	
"DI" Tower,	Blair Gap W. S. Co.,			
	Tipton W. Co.,		75,000	
East Altoona "WJ,"	Blair Gap W. S. Co.,		45,000	
East Altoona R. H. & coal wharf	Blair Gap W. S. Co.,			
	Tipton W. Co.,		2,500,000	
East Altoona repair track,	Blair Gap W. S. Co.,			
	Tipton W. Co.,		50,000	
Juniata coal wharf,	Blair Gap W. S. Co.,			
	Tipton W. Co.,		90,000	
Car shop yard "GD,"	Blair Gap W. S. Co.,		75,000	
Car shop yard,	Blair Gap W. S. Co.,		48,000	
Ash pit,	Blair Gap W. S. Co.,		65,000	
Altoona, 14th St.,	Blair Gap W. S. Co.,		100,000	
Altoona, R. H. No. 3,	Blair Gap W. S. Co.,		420,000	
Altoona, 24th St.,	Blair Gap W. S. Co.,			
South Altoona,	Blair Gap W. S. Co.,		350,000	
Hollidaysburg,	Blair Gap W. S. Co.,		425,000	
Roaring Springs,	Municipal works,			10,500
Martinsburg,	Martinsburg W. Co.,			17,000
Henrietta,	Spring,	Gravity,	7,000	
Ganister,	Juniata River,	Pumped,	124,000	
Clover Ck. "KZ,"	Williamsburg Munic. Works,			
	Juniata River,	Pumped,		
Alexandria,	Alexandria W. Co.,			30,000
Pittsburgh Division				
Kittanning Point,	Blair Gap W. S. Co.,			
	Bakers Run,	Gravity,	243,000	
Mule Shoe,	Blair Gap W. S. Co.,		88,000	

RAILROAD WATER SUPPLIES, SECTION NO. 10—Continued

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Tyrone Division				
East Tyrone,	Tipton W. Co.,		800,000	
	Little Bald Eagle Creek,	Pumped,	800,000	
Gardner,	Small Run,	Gravity,	18,000	
Mt. Pleasant,	Fill Run,	Pumped,		
	Spring,	Gravity,	50,000	
Bedford Division				
Bedford,	Juniata River,	Pumped,	55,000	
Cessna,	Creek,	Pumped,	22,000	
Claysburg,	Run,	Gravity,	23,000	
Mullins,	Run,	Gravity,	4,500	
Bellwood Division				
Bellwood,	Bell Run,	Pumped,		
	Tipton W. Co.,		277,000	
Lloydville,	Spring,	Pumped,	50,000	
Totals,			7,755,106	187,415

INDUSTRIAL WATER SUPPLIES, SECTION NO. 10 (MISCELLANEOUS COMPANIES)

Does not Include all the Smaller Companies

Place	Company	Source	Method	Industrial consumption (gallons per day)	Daily amount of product	Returned to stream (%)	Increase in temp. °F.
Altoona, Blair County,	Altoona & Logan Val. Elec. Ry.	3 drilled wells,	Pumped,	280,000			
	Home Elec. Light & Steam Ht. Co.	"The Big Spring," Juniata River	Pumped,	1,000,000		100	
Manns Choice, Bedford County,	Elk Tanning Co.,	Buffalo Run,		100,000			
Tyrone, Blair County,	W. Virginia Pulp & Paper Co.	Bald Eagle W. Co.,		7,500,000	40 tons pulp 70 tons paper	90	11 (in summer)
Williamsburg, Blair County,	W. Virginia Pulp & Paper Co.	Spring,	Gravity,	5,000,000		90	11 (in summer)
Total from private systems,				13,880,000			

INDUSTRIAL WATER SUPPLIES, SECTION NO. 10 (COAL MINING COMPANIES)

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
Bedford County—							
Kearney,	Kearney Coal & Coke Works,	Long's Run,	Gravity to 40,000 gal. res.	----------	s30,000 c85,000	426 coal 248 coke	3
Langdondale,	The Carbon Coal & Coke Co.,	Small stream, branch of Juniata River	(3 months, hauled by R. R.)	----------	12,250	538	5
Riddlesburg,	Colonial Iron Co. (Judith Mine),	Juniata River,	Pumped,	----------	25,000	516	1
Huntingdon County—							
Melrose,	Minersville Coal & Coke Works,	Miller's Run, Drilled well (aux.)	Gravity to 30,000 gal. res.	----------	s20,000 c40,000	525 coal 80 coke	2
Robertsdale,	The Rockhill Iron & Coal Co.,	See Robertsdale, Section No. 10	----------	20,000 (1,700 pop.)	65,000	1,744	3
Total from private systems,				20,000	277,250		

sWater for steam purposes.
cWater for quenching coke.

ALEXANDRIA BOROUGH, HUNTINGDON COUNTY

ALEXANDRIA WATER COMPANY

Population 1910 census, 432; increase since 1900, 26. Estimated 1915, 450a

LOCATION

Western Huntingdon County, on Frankstown Branch of Juniata River, 8 miles northwest of Huntingdon, on Pennsylvania R. R., Petersburg Branch of Middle Division.

INDUSTRIES

Agriculture; brick works.

WATER SUPPLY

Alexandria Water Co., chartered under the laws of Delaware in 1903.

SOURCE AND COLLECTION

Loop Run, tributary of Frankstown branch of Juniata River, 2 miles southeast of borough; 6,000,000 gallon reservoir 4 miles south of borough. Water soft.

DISTRIBUTION

By gravity through 8-inch, reducing to 6-inch, main; 6 miles distributing mains; pressures 135 to 150 pounds; 12 fire hydrants, 4-inch.

CONSUMPTION

Supply to 600 people; 160 taps. No means of measuring consumption; assuming 30 gallons per capita, domestic, would be 18,000 gallons daily. Supplies Pennsylvania R. R. about 30,000 gallons daily from a point 0.5 mile west of borough.

ALTOONA CITY, BLAIR COUNTY

MUNICIPAL WATER WORKS
ALLEGHENY WATER COMPANY

Population 1910 census, 52,127; increase since 1900, 13,154.
Estimated 1915, 60,000

LOCATION

Central western Blair County, on divide between Little Juniata and Frankstown branch of the Juniata River; on Middle Division of Pennsylvania R. R., and terminus of Hollidaysburg Branch; terminus of Altoona, Juniata & Northern Ry., and Altoona & Logan Valley Electric Ry.

INDUSTRIES

Locomotive and car shops, yards, repair shops and offices of Pennsylvania R. R., said to be largest in world; planing mills, silk mills, brick and tile works and breweries.

WATER SUPPLY

Municipal plant built in 1873. The Altoona Gas and Water Co. sold supply from Kettle Run to borough in 1872. Water rights held on Burgoon Run and its tributaries and on Sugar Run and Riggles Gap Run by purchase from Pennsylvania R. R. Measured combined minimum flow about 1,564,000 gallons daily. Water medium hard. The Allegheny Water Co. supplies 500 persons within city limits.

SOURCE AND COLLECTION

Three storage reservoirs on Burgoon Run below the "Horseshoe Curve" of Pennsylvania R. R. 4 miles west of city.

(1) Kittanning Point reservoir, 65,000,000 gallons capacity, at junction of Kittanning and Glenwhite runs.

(2) Impounding reservoir, just below No. 1, 365,000 gallons capacity.

(3) Below these two, and including mouths of Scotch and McGarvey runs, in Burgoon Run, Lake Altoona has been under construction since 1906.

Present capacity 600,000,000 gallons, elevation flow line 1,348; completed capacity 1,600,000,000 gallons, elevation flow line 1,375; drainage area 11.2 square miles.

All water except immediate drainage areas of reservoirs may be passed around reservoirs, in flood water channel.

(4) Sugar Run, tributary of Beaverdam Branch, near mouth of Burgoon Run, south of Altoona. Intake about 1.5 miles south of Lake Altoona will be placed in service in 1915.

At times of shortage or other emergency a temporary supply has been taken from or furnished to the Blair Gap Water Supply Co., which supplies the Pennsylvania R. R. in this vicinity.

(5) Intake on Kettle Run between reservoirs of Blair Gap Water Supply Co. used for fire purposes. (See "Pennsylvania Railroad," this section.)

DISTRIBUTION

High and low service, former supplied from (1) and low service from the other reservoirs.

From reservoirs (1) and (2) 24-inch and 16-inch mains to two distributing reservoirs in city, 6,000,000 gallon high service and 13,000,000 gallon low service.

From Lake Altoona a 30-inch main, 3,000 feet long, joins 24-inch main from impounding reservoir (2) and will be extended to city on completion of Lake Altoona. Pressure varies between 25 and 98 pounds. Distributing mains as follows:

Size (inches),	24	16	12	8	6	4	3	Total
Length (miles),	4.7	10.8	18.5	24.1	23.1	6.0	0.2	92.4
Per cent.,	5	12	20	26	30	7		100

Eight hundred and fifty-four fire hydrants 6-inch, and 293 4-inch.

CONSUMPTION

Supply to 55,500 people; 13,453 taps. Consumption 5,200,000 gallons daily, measured by Venturi meters. Metered taps 790, 34 industrial. Metered consumption, 33,427 gallons daily industrial and 61,350 gallons daily domestic.

COST AND REVENUE

Total cost of works to April 6, 1913, $2,220,000; annual operating expenses, about $7,000; gross revenue fiscal year ending April 6, 1913, $142,000.

ALTOONA, SUBURBS OF (LOGAN AND ALLEGHENY TWPS.), BLAIR COUNTY

THREE WATER COMPANIES AND TWO PRIVATE SUPPLIES

Total estimated 1915 population, 2,580b

This territory includes several suburban residential settlements east and south of Altoona City, Blair County, as follows:

ROSELAWN ADDITION

Roselawn Water Company

Estimated 1915 population, 250b

LOCATION

In Logan Township, adjoining South Altoona on southwest, 3 miles from center of Altoona and connected with that city by trolley.

WATER SUPPLY

Roselawn Water Co., incorporated 1910, for part of Logan Township.

SOURCE AND COLLECTION

Two drilled wells 103 feet deep and 12 feet apart in center of district; capacity 129,000 gallons daily by test. Only one well used at a time, the installation being in duplicate. A 96,500 gallon Hill pump over each well pumps water through 6-inch main direct to system. Water medium hard.

DISTRIBUTION

By pumping direct to distributing system. Distributing mains, 2.6 miles 2-inch to 6-inch pipes, 73% 4-inch; pressures 40 to 100 pounds; no fire hydrants.

CONSUMPTION

Supply to 200 people; 53 taps. Stated consumption 12,500 gallons daily, all domestic, measured by pump displacement; maximum consumption 20,000 gallons daily.

GREEN'S EXTENSION

Green Hill Water Company

Estimated 1915 population, 25b

LOCATION

Just outside northeastern boundary of Altoona.

WATER SUPPLY

Green Hill Water Co., incorporated 1910 for Logan Township; works completed in 1912. Water from 10-inch drilled well, 330 feet deep, pumped by 5 hp. electric pump to 4,000 gallon tank. Five houses supplied by 600 feet of 1½-inch pipe at 70 pounds pressure. Stated consumption 1,000 gallons daily, measured by pump capacity.

SOUTH ALTOONA, LLYSWEN, LAKEMONT, LAKEMONT TERRACE, SOUTH LAKEMONT AND SYLVAN HILLS VILLAGES

The Allegheny Water Company

Estimated 1915 population, 1,800b

LOCATION

South of Altoona, in Logan and Allegheny townships.

WATER SUPPLY

The Allegheny Water Co., incorporated 1892 for Logan Township.

SOURCE AND COLLECTION

Mill Run, tributary of Beaverdam Branch of Juniata River, south of Altoona; 65,000,000 gallon reservoir 3 miles west of city; watershed area 6 square miles.

DISTRIBUTION

By gravity through 12-inch main; pressures 90 to 100 pounds.

CONSUMPTION

Supply to 2,300 people, 500 in Altoona. Stated consumption 1,201,000 gallons, 148,000 gallons domestic and 1,053,000 industrial. No means of measurement. Altoona Iron Co. and Logan Valley Electric Ry. supplied during dry season, when private well supply is not sufficient.

LANDER'S EXTENSION

Private Supply

Estimated 1915 population, 225b

LOCATION

Adjacent to eastern end of Altoona.

WATER SUPPLY

Private system of W. A. Lander, built 1905. Water from drilled well, 235 feet deep, in sandstone formation, with constant flow, pumped by 10,000 gallon electric pump to 20,000 gallon reservoir. Water medium hard. A 2-inch gravity main supplies 56 taps at 10 pounds pressure. No means of measuring consumption; assuming 40 gallons per capita, would be 9,000 gallons daily, all domestic.

BALTZELL'S EXTENSION

Private Supply

Estimated 1915 population, 280b

LOCATION

Adjacent to eastern end of Altoona.

WATER SUPPLY

Private system of Thomas Baltzell, installed 1892. Water from drilled well, 383 feet deep, in limestone and sandstone formation, pumped by 21,600 gallon electric pump to 72,000 gallon reservoir. Water medium soft. A 2-inch gravity line supplies 70 taps at 40 to 50 pounds pressure. No means of measuring consumption; assuming 40 gallons per capita, would be 11,200 gallons, all domestic.

ANTIS TOWNSHIP, BLAIR COUNTY

BELLWOOD WATER WORKS COMPANY

Estimated population, 225b

LOCATION

Northern Blair County, in vicinity of Bellwood Borough, on Little Juniata River.

WATER SUPPLY

Bellwood Water Works Co., reorganized 1897 after sheriff's sale of Bellwood Water Co., incorporated 1893 for Bellwood Borough.

SOURCE AND COLLECTION

Bells Gap Run; a 5,000 gallon intake short distance below that of Bellwood water works. This company and Bellwood municipal supply control water rights on this stream, but surplus may be used by Pennsylvania R. R., which has reservoir above intake.

DISTRIBUTION

By gravity through 10-inch main from intake to outskirts of Bellwood Borough.

CONSUMPTION

Supply to 225 people; 50 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 6,800 gallons daily, all domestic.

BEDFORD BOROUGH, BEDFORD COUNTY

MUNICIPAL WATER WORKS AND PRIVATE SUPPLIES

Population 1910 census, 2,235; increase since 1900, 68. Estimated 1915, 2,300b

LOCATION

County seat, in central Bedford County, on Raystown Branch of Juniata River; on Pennsylvania R. R.

INDUSTRIES

Center of agricultural district; summer resorts in vicinity at mineral springs; handle factory, peanut factory, planing mills, bottling works and foundry.

WATER SUPPLY

Municipal plant operating since 1872; improved in 1899. Four large summer resort hotels near Bedford have private supplies.

SOURCE AND COLLECTION

(1) Gravel Hill Spring, original source, rises on hill in southern part of borough; small covered reservoir, 16,000 gallons capacity nearby. This supply entirely separate from other two described.

(2) Millburn Spring and Todd Spring sources added in 1899. Todd Spring rises in mountain, west of borough; water impounded in 25,000,000 gallon reservoir 2 miles west of borough. Millburn Spring 2.5 miles southwest of borough; water impounded in 5,000,000 gallon reservoir. Auxiliary supply during very dry seasons by pumping from Juniata River. Pumping plant capacity, 864,000 gallons daily.

DISTRIBUTION

From (1) by gravity through 2-inch main.

From (2) by gravity through 8-inch main from Todd Spring reservoir and 4-inch gravity main from Millburn reservoir; pressure 60 pounds.

CONSUMPTION

Supply to 2,500 people, including a few families in surrounding township; 550 taps. Stated average daily consumption 127,000 gallons. No means of measurement.

Bedford Springs Hotel—At Bedford Springs, 1.5 miles from Bedford Borough. The Bedford Springs Co., Ltd., proprietors of hotel, own springs and an estate of nearly 4,000 acres surrounding them. Average number of hotel guests during summer 300. For table purposes, water from Sweet Spring served in bottles. Flow of spring about 14,000 gallons daily. Supply for bathing and general household purposes from limestone spring 1 mile north of hotel; flow about 220,000 gallons daily. A 6-inch pipe line from spring to hotel, stables, etc., supplying by gravity under head of 80 feet. Water from the Magnesia Mineral Spring pumped into hotel for bathing purposes and bottled for shipping; flow at about 50,000 gallons daily. The Stillhouse Spring flows about 36,000 gallons, and to some extent is bottled.

Arandale Hotel—Midway between Bedford Borough and Bedford Springs; a summer resort hotel accommodating 150 people, open from June 1 to October 1. Water supply from sandstone spring rising in Mountain just east of hotel. A 75,000 gallon reservoir supplies by gravity through 2½-inch main. Consumption not measured.

Chalybeate Hotel—At Chalybeate Spring, 1.5 miles northeast of Bedford. Average number of guests during summer about 130. Supply from two sandstone springs, one rising above hotel and other at hotel. Water pumped by Knowles duplex pump from second spring to 20,000 gallon reservoir on hillside just above hotel, which supplies by gravity through 2-inch main. Water from first piped to hotel and used only in winter. Consumption not measured.

White Sulphur Springs Hotel—Summer hotel accommodating about 125 guests. Water supply for drinking and bathing purposes furnished by pumping from sulphur spring; flow, 5,000 gallons daily. Pumping equipment a No. 8 Gould force pump driven by gasoline engine, capacity 36,000 gallons daily. For flushing and household purposes gravity supply secured from small mountain stream flowing by hotel. Consumption not measured; estimated as 7,000 gallons daily. During dry seasons stream dries up and entire flow of spring used.

BELLWOOD BOROUGH, BLAIR COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 2,277; increase since 1900, 732. Estimated 1915, 2,600

LOCATION

Northern Blair County, on Little Juniata River, at mouth of Bells Gap Run, halfway between Altoona and Tyrone; on Middle and Bellwood Divisions of Pennsylvania R. R., and Altoona & Logan Valley Electric Ry.

INDUSTRIES

Bellwood Mfg. Co. foundry, repair shops, glove factory, and flour mills; offices of Bellwood Division of Pennsylvania R. R.

WATER SUPPLY

Municipal plant built 1893. This borough and Bellwood Water Works Co. own all water rights on Bells Gap Run. Surplus may be used by Tipton Water Co. of Pennsylvania R. R.

SOURCE AND COLLECTION

Bells Gap Run, tributary to Little Juniata River, at borough. A 35,000 gallon intake 2.5 miles northwest of borough and 0.5 mile below 65,000,000 gallon Pennsylvania R. R. reservoir, and just above intake of Bellwood Water Works Co. Water medium hard.

DISTRIBUTION

By gravity through 1.5 miles of 10-inch main, reduced to 8-inch for 1.5 miles; pressures 95 to 100 pounds; 4 miles distributing mains 2-inch to 6-inch, 72% is 3-inch; 60 fire hydrants, 60% 5-inch and 40% 3-inch.

CONSUMPTION

Supply to 2,200 people; 548 taps. Stated consumption 70,000 gallons daily, 95% domestic and 5% industrial. No means of measurement.

COST AND REVENUE

Estimated total cost of works, $26,000; annual operating expenses, $950; gross revenue, $4,500.

BIRMINGHAM BOROUGH, HUNTINGDON COUNTY

PRIVATE SUPPLY

Population 1910 census, 196; decrease since 1900, 44. Estimated 1915, 200a

LOCATION

Extreme northwestern Huntingdon County, on Little Juniata River; on Middle Division of Pennsylvania R. R., 3 miles southwest of Tyrone.

WATER SUPPLY

Private supply from hard limestone spring in northern end of borough. Spring piped short distance to two troughs, from which people

draw water. No means of measuring consumption. About 50 people use private supply of Birmingham School system.

THE BIRMINGHAM SCHOOL SUPPLY

The girls' school has private supply from spring and artesian well, installed 1860, at eastern end of school ground. Works capable of furnishing 10,000 gallons daily. Water from springs piped to 18,000 gallon reservoir and distributed by 2-inch line to buildings and to trough in borough. A 7 to 10 g. p. m. pump delivers water from artesian well into distributing reservoir during dry seasons or emergencies. Supply to 75 students of school and 50 people in borough. Stated consumption, 30,000 gallons daily, all domestic. No means of measurement.

BLAIR COUNTY HOME AND HOSPITAL FOR INSANE (ALLEGHENY TWP.), BLAIR COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 425a

LOCATION

Central Blair County, 1 mile northwest of Hollidaysburg, in valley of Beaverdam Branch of Juniata River.

WATER SUPPLY

Spencer Run, tributary of Beaverdam Branch of Juniata River, in valley opposite Home; intake 3 miles west of institution. Four-inch pipe 3.75 miles to two covered wooden reservoirs of 28,275 and 74,235 gallons capacity, on hill west of main building. Water soft.

During dry seasons auxiliary supply obtained by pumping from drilled well with 43,200 gallon pump, near reservoirs.

DISTRIBUTION

By gravity through 6-inch main 1,500 feet long; pressure about 67 pounds. About 500 feet of 3-inch distributing pipe.

CONSUMPTION

Supply to 425 people. Stated consumption 75,000 gallons daily. No means of measurement.

BLAIR (LOGAN TWP.), BLAIR COUNTY

HOME WATER SUPPLY COMPANY

Estimated 1915 population, 175a

LOCATION

Northern central Blair County on Little Juniata River, opposite Juniata Borough; on Middle Division of Pennsylvania R. R., and Altoona & Logan Valley Electric Ry.

INDUSTRIES

East Altoona roundhouse of Pennsylvania R. R.

WATER SUPPLY

Home Water Supply Co., incorporated 1905 for Logan Township.

SOURCE AND COLLECTION

Green Spring, rising in Brush Mountain, 2 miles east of village, collected in 20,000 gallon reservoir. Minimum flow of spring, 50,000 gallons daily. Water soft.

DISTRIBUTION

By gravity through 5-inch main; pressure from 30 to 90 pounds; 2.6 miles distributing mains; no fire hydrants.

CONSUMPTION

Supply to 150 people; 36 taps. Stated consumption 5,000 gallons daily, all domestic. No means of measurement.

DUNCANSVILLE BOROUGH, BLAIR COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,263; decrease since 1900, 249. Estimated 1915, 1,500a

LOCATION

Southwestern Blair County, on Blairs Gap Run, tributary of Beaverdam Branch of Frankstown branch of Juniata River, 2 miles

west of Hollidaysburg; on Bedford Division of Pennsylvania R. R. Farming district.

WATER SUPPLY

Municipal plant built in 1902. About 50 houses supplied from Adams Run line of Hollidaysburg water works.

SOURCE AND COLLECTION

Gillans Run, tributary of Beaverdam Branch of Juniata River; 500,000 gallon reservoir 3 miles northwest of borough. Watershed area about 0.5 square mile, of which borough owns 300 acres. Water soft.

DISTRIBUTION

By gravity through 8-inch main; pressures 92 to 108 pounds; 6 miles distributing mains; 13 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,500 people; 300 taps. Stated consumption, all domestic, 6,000 gallons daily. No means of measurement.

COST AND REVENUE

Total cost of works, $37,000; annual operating expenses, $450; gross revenue, $1,600.

EVERETT BOROUGH, BEDFORD COUNTY

EVERETT WATER COMPANY

Population 1910 census, 1,725; increase since 1900, 139. Estimated 1915, 2,000a

LOCATION

Eastern central Bedford County, on Juniata River; on Pennsylvania R. R. and Huntingdon & Broad Top R. R.

INDUSTRIES

Planing mill, foundry, bottling works and mattress factory.

WATER SUPPLY

Everett Water Co., incorporated 1888 for Everett Borough.

SOURCE AND COLLECTION

(1) A limestone spring rising in borough; water pumped to 700,000 gallon reservoir on Warriors Ridge, west of borough, by Worthington duplex pump of 450,000 gallons capacity daily. Estimated minimum flow 57,000 gallons daily. Water hard.

(2) Williams Tunnel and Tatesville Tunnel Run springs, 3 miles northeast of borough. Water pumped from 30,000 gallon receiving basin by 432,000 gallon Smith-Vaile triplex pump connected to 20 hp. oil engine, through 6-inch main 5,000 feet to source (1) reservoir. Estimated flow of Williams Spring 55,000, and of Tatesville Spring 325,000 gallons daily. Water soft.

DISTRIBUTION

By gravity through 12-inch main. Length of distributing mains 7.5 miles; pressures from 60 to 65 pounds; 30 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,000 people; 220 taps. Average daily consumption, 100,000 gallons; 95% domestic and 5% industrial; measured by pump displacement.

GAYSPORT BOROUGH, BLAIR COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 917; increase since 1900, 108. Estimated 1915, 950a

LOCATION

Southern central Blair County, on Beaverdam Branch of Frankstown branch of Juniata River, directly across from Hollidaysburg, which is post-office address; on Hollidaysburg Branch of Pennsylvania R. R.

INDUSTRIES

Foundry and machine shop.

WATER SUPPLY

Municipal works built in 1884.

SOURCE AND COLLECTION

Dry Gap Run, 2.5 miles south of borough, in Look Mountain; 1,500,000 gallon storage reservoir 1 mile below source. Water very soft.

DISTRIBUTION

By gravity through 5.8 miles of main; pressure 132 pounds; 23 fire hydrants, 4-inch.

CONSUMPTION

Supply to 550 people; 233 taps. Stated consumption 40,000 gallons daily, 30,000 domestic and 10,000 industrial. No means of measurement.

COST AND REVENUE

Total cost of works, $19,000; gross annual operating expenses, $500; gross revenue, about $2,800.

GREENWOOD (LOGAN TWP.), BLAIR COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 400a

LOCATION

Northern central Blair County, on Little Juniata River, at mouth of Kettle Creek, opposite Juniata Borough; on Pennsylvania R. R. Residential suburb of Altoona.

WATER SUPPLY

Since 1906 by private system of J. M. Hutchison.

SOURCE AND COLLECTION

Spring rising in an old mine shaft 1.5 miles southeast of borough; flow said to be constant. A 4-inch gravity main leads to 7,000 gallon reservoir below spring. Water soft.

DISTRIBUTION

By gravity through 4-inch main; pressures 40 to 80 pounds; distributing main, 0.87 mile. No fire hydrants.

CONSUMPTION

Supply to 350 people; 70 taps. No means of measuring consumption; assumming 30 gallons per capita, would be 10,500 gallons daily, all domestic.

HOLLIDAYSBURG BOROUGH, BLAIR COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 3,734; increase since 1900, 736. Estimated 1915, 4,000a

LOCATION

County seat, in central Blair County, on Beaverdam Branch a short distance above its mouth with Frankstown branch of Juniata River; on Pennsylvania R. R. and Altoona & Logan Valley Electric Ry.

INDUSTRIES

Pennsylvania R. R. yards, iron and roller mills and several manufacturing plants.

WATER SUPPLY

Municipal works built in 1867, on Roaring Run. Additions made since that time on Adams Run, tributary of Blairs Gap Run.

SOURCE AND COLLECTION

(1) Intake on Roaring Run, tributary of Frankstown branch of Juniata River, 2 miles northeast of borough; watershed area 1,100 acres.

(2) Adams Run; intake just above junction with Blairs Gap Run, 7 miles west of borough; watershed area 4,000 acres. Practically no storage. Water soft.

DISTRIBUTION

From (1) by gravity from Roaring Run intake through 6-inch main to eastern end of borough; 40 pounds pressure.

From (2) by gravity from Adams Run intake through 12-inch main to borough; distributing mains 9 miles 8-inch to 1-inch, 52% 4-inch; pressures 100 to 110 pounds; 60 fire hydrants. Supplies largest part of borough.

CONSUMPTION

Supply to 4,500 people; 1,000 taps. Stated consumption, 360,000 gallons daily, 95% domestic and 5% industrial. No means of measurement. The Pennsylvania R. R. has its own source of supply.

HOPEWELL BOROUGH, BEDFORD COUNTY

PRIVATE SUPPLY

Population 1910 census, 590; increase since 1900, 108. Estimated 1915, 600b

LOCATION

Northeastern Bedford County, on Raystown branch of Juniata River; on Huntingdon & Broad Top Mountain R. R.

WATER SUPPLY

The hotels in this borough secure drinking supplies from private wells; for general domestic purposes by pumping from Juniata River by means of rams.

HUNTINGDON BOROUGH, HUNTINGDON COUNTY

HUNTINGDON WATER SUPPLY COMPANY

Population 1910 census, 6,861; increase since 1900, 808. Estimated 1915, 7,000a

LOCATION

County seat, in northern central Huntingdon County, on east bank of Juniata River; on Middle Division of Pennsylvania R. R.

INDUSTRIES

Two stationery and bank book manufacturing companies, machine shop, foundry, radiator manufacturing plant, hosiery mill and repair shops of Pennsylvania R. R.

WATER SUPPLY

Huntingdon Water Supply Co., incorporated 1900 for Huntingdon Borough. From 1885 to 1900 operated as Huntingdon Water Co., Ltd., an unchartered company. Now operated and controlled by officials connected with National Waterworks and Guarantee Co., of Scranton, Pa.

SOURCE AND COLLECTION

Standing Stone Creek, tributary of Juniata River, south of borough; intake 1,000 feet above mouth and about 0.5 mile southeast of borough; watershed area 115 square miles. Water pumped from intake well through 10-inch line to 3,500,000 gallon reservoir on hill north of borough. Pumping equipment 1,500,000 gallon Platt centrifugal pump connected to 150 hp. electric motor, auxiliary 800,000 gallon Gould triplex pump connected to 75 hp. electric motor. From reservoir water flows through mechanical filters as follows:

	Capacity (gals.)	Elevation
Sedimentation basin,	990,000	852
Coagulating basin,	594,000	----------
Two filter units,	1,200,000	----------
Two filtered water reservoirs, each,	50,000	830

DISTRIBUTION

By gravity through 12-inch main; pressures from 65 to 90 pounds. Distributing mains as follows:

Size (inches),	12	10	8	6	4	2½	2	Total
Length (miles),	0.9	1.1	1.3	5.4	6.0	0.1	0.4	15.2
Per cent.,	6	7	8	36	40	1	2	100

Fifty-one fire hydrants, 4-inch.

CONSUMPTION

Supply to 7,000 people; 1,500 taps. Average daily consumption, 834,000 gallons, 91% domestic; measured by meter on force main. The Huntingdon & East Broad Top R. R. is furnished 20,000 gallons daily. Twenty-five taps metered, consumption 75,000 gallons, all industrial.

JUNIATA BOROUGH, BLAIR COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 5,285; increase since 1900, 3,576. Estimated 1915, 6,500a

LOCATION

Northern central Blair County, about 0.25 mile from Little Juniata River, opposite city of Altoona; on Pennsylvania R. R. and Altoona & Logan Valley Electric Ry.

INDUSTRIES

Juniata shops and yards of Pennsylvania R. R., silk mill.

WATER SUPPLY

Municipal plant built in 1897 and enlarged in 1912. Industrial supply to shops furnished by Tipton Water Co., with reservoirs on Tipton and Bells Gap runs.

SOURCE AND COLLECTION

Homer Gap Run, tributary of Little Juniata River, at eastern end of borough. A 900,000 gallon storage reservoir 3.5 miles northwest of borough; 950 feet downstream a new 23,000,000 gallon storage reservoir; watershed area 2.3 square miles, practically all owned by borough. Minimum flow, 263,600 gallons per day, weir measurement September, 1910. Old reservoir 295 feet above business district, new reservoir 17 feet lower than old. Water very soft.

DISTRIBUTION

By gravity through 8-inch main; pressures 50 to 110 pounds; 6 miles distributing mains, mostly 4-inch; 82 fire hydrants.

CONSUMPTION

Supply to 6,000 people; 1,350 taps. Consumption, 300,000 gallons daily; 12,000 gallons industrial. No means of measurement.

COST AND REVENUE

Total estimated cost of works, $100,000; annual operating expenses, $1,500; gross revenue, $8,500.

MANNS CHOICE BOROUGH, BEDFORD COUNTY

PRIVATE SUPPLY

Population 1910 census, 341; increase since 1900, 29. Estimated 1915, 350b

LOCATION

Western Bedford County, on Raystown Branch of Juniata River, near mouth of Buffalo Creek.

WATER SUPPLY

The hotel in this borough is supplied from a spring rising in mountain east of borough. Supply furnished by gravity and is also led to a public tank from which any one so desiring may carry or use the water.

MARTINSBURG BOROUGH, BLAIR COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 920; increase since 1900, 330. Estimated 1915, 1,400a

LOCATION

Southern Blair County, on Plum Creek, tributary of Frankstown branch of Juniata River; Hollidaysburg, Morrisons Cove & Martinsburg Branch of Pennsylvania R. R.

INDUSTRIES

Agriculture; two flour mills and a planing mill.

WATER SUPPLY

Municipal works built by Martinsburg Water Co., incorporated 1892 for Martinsburg Borough and purchased by borough in 1914.

SOURCE AND COLLECTION

Tributary of Plum Creek, rising in southern part of Loop Mountain, north of borough; 500,000 gallon reservoir 2 miles northwest of borough. Water soft.

DISTRIBUTION

By gravity through 6-inch main 2 miles long; pressures 90 to 120 pounds; 13 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,300 people; 300 taps. Stated consumption 30,000 gallons daily, 90% domestic and 10% industrial. No means of measurement. Small amount furnished to Pennsylvania R. R.

PENNSYLVANIA INDUSTRIAL REFORMATORY, HUNTINGDON COUNTY

PRIVATE SUPPLY

Estimated 1915 population, about 800a

LOCATION

Northern central Huntingdon County, on west bank of Frankstown Branch of Juniata River, about 1 mile above Huntingdon. Built about 1888.

WATER SUPPLY

Private system installed in 1888 and added to in 1894. Original source used only for drinking purposes; new source for washing, flushing, steam and fire purposes.

SOURCE AND COLLECTION

(1) Drinking water supply from springs rising 0.5 mile west of institution. These springs feed four to five million gallon reservoir. Water soft.

(2) New supply from Frankstown branch of Juniata River, opposite institution, by two 30-inch intake pipes to pump well. Water pumped through 1,000,000 gallon pressure filter to 500,000 gallon reservoir on hill 116.5 feet above pumps. Filter and reservoir can be by-passed. Pumping equipment two Worthington duplex pumps with 8-inch suctions and 12-inch force main; capacity of one, 1,000,000 gallons and other 432,000 gallons daily.

DISTRIBUTION

From (1) by gravity through 8-inch main from spring reservoir to 1,000,000 gallon pump at institution, which raises water through

8-inch force main into 38,460 gallon circular covered reservoir. Buildings supplied with drinking water by 8-inch gravity pipe, 25 pounds pressure.

From (2) by gravity through 12-inch main; pressures 60 to 65 pounds; 17 fire hydrants, 4-inch.

CONSUMPTION

Supply to 698 inmates and 102 officers. Consumption not measured; estimated at 270,000 gallons daily, 20,000 from spring supply for drinking purposes.

PENNSYLVANIA RAILROAD, BLAIR COUNTY

TIPTON WATER COMPANY

BLAIR GAP WATER SUPPLY COMPANY

LOCATION

Main line Pennsylvania R. R. traverses Section No. 10 in east and west direction, following north bank of Juniata River to Petersburg, about 88 miles above its mouth, where it swings to the north, following Little Juniata River and passing through boroughs of Huntingdon and Tyrone and city of Altoona. From Altoona, at elevation 1,178.9, railroad climbs Allegheny Mountains, crossing summit through Gallitzin tunnel at elevation 2,125.

WATER SUPPLY

Large part of main line's water supply from eight incorporated water companies, each forming separate system. Charters for these companies obtained and works built by American Pipe Mfg. Co. of Philadelphia, a complete description of which is included under Pennsylvania Railroad, Section No. 12. Description of each of these systems is given in sections in which source of supply is located.

Supply between East Tyrone and Altoona furnished by Tipton Water Co., incorporated 1903 for Antis Township, Blair County. This company purchased in 1905 the property and franchises of Merivale Water Supply Co., incorporated for Logan Township, Blair County.

Supply between Altoona and Kittanning Point furnished by Blair Gap Water Supply Co., incorporated 1905 as merger of Greenfield Water Supply Co., Blue Knob Water Supply Co. and Glen Water

Supply Co., all incorporated in 1905. Subsequent to this merger the Antis Water Supply Co. and Bellvoir Water Co. were purchased. These charters cover Allegheny, Juniata, Logan and Antis townships, Blair County.

TIPTON WATER COMPANY

SOURCE AND COLLECTION

Tipton Run, tributary to Little Juniata River, 4 miles above Tyrone, two intakes, about 2.5 and 4 miles above mouth, and 5 miles west of Tyrone.

DISTRIBUTION

By gravity through 12-inch main, 1 mile down creek, where it receives 10-inch line from small intake on Loup Run and continues as a 15-inch line to railroad right-of-way at Tipton, thence west to Altoona, and east to East Tyrone, through 12-inch line.

CONSUMPTION

Supply, entirely industrial, to railroad as follows:

Place	Estimated average daily consumption (gals.)
Tyrone,	----------
Tipton,	132,000
*East Altoona enginehouse and coal wharf,	2,500,000
*East Altoona repair track,	50,000
Bellwood, Bellwood Division,	277,000
*Juniata coal wharf,	90,000
*"DI" tower,	75,000

*Part of supply furnished by Blair Gap Water Supply Co.

BLAIR GAP WATER SUPPLY COMPANY

SOURCE AND COLLECTION

(1) Bell Gap Run, tributary of Little Juniata River, 5 miles below Altoona; 63,014,000 gallon storage reservoir 3 miles above mouth; watershed area 14 square miles.

(2) Kettle Run; Kettle reservoir, capacity 187,810,000 gallons, at headwaters two miles east of Altoona. Pottsgrove reservoir 1.5 miles below, capacity 30,594,000 gallons. A 1,200,000 gallon intake between upper and lower reservoir used for fire supply to Altoona.

(3) Blair Gap Run; 27,200,000 gallon storage reservoir 1 mile below source, 7 miles west of Hollidaysburg; watershed area 3 square miles. Another storage reservoir, capacity 116,500,000 gallons, 1.5 miles below first; watershed area 12.5 square miles.

(4) Riggles Gap Run, tributary to Little Juniata River between Bellwood and Juniata; intake 2 miles above mouth.

DISTRIBUTION

From (1) By gravity through 16-inch main paralleling railroad, from reservoir on Bell Gap Run to Altoona.

From (2) by gravity from Pottsgrove reservoir through 12-inch mains to Altoona. By gravity from intake through 12-inch main to Altoona (fire line).

From (3) by gravity through 12-inch main from upper reservoir to 2,350,000 gallon distributing reservoir on main line of railroad near "Horseshoe Curve," continuing to 2 standpipes, capacity 440,000 gallons and 215,000 gallons, at Kittanning Point. By gravity through 16-inch main from lower reservoir to Hollidaysburg, pressure reduced by 1,021,924 gallon equalizing reservoir.

From (4) by gravity through 8-inch main to Juniata.

CONSUMPTION

Supply entirely industrial to following places:

Place	Estimated average daily consumption (gals.)
*"DI" tower,	75,000
East Altoona, "WJ" tower,	45,000
*East Altoona enginehouse and coal wharf,	2,500,000
*East Altoona repair track,	50,000
*Juniata coal wharf,	90,000
Car shop yard, "GD" tower,	75,000
Car shop yard,	48,000
Altoona, Fourth street ashpit,	65,000
Altoona, Fourteenth street,	100,000
Altoona, enginehouse No. 3,	420,000
Altoona, Twenty-fourth street,	----------
South Altoona,	350,000
Hollidaysburg,	425,000
Kittanning Point,	243,333
Mule Shoe,	87,233

*Part of supply furnished by Tipton Water Co., the figures for average daily consumption being the total amount.

RAINSBURG BOROUGH, BEDFORD COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 203; decrease since 1900, 16. Estimated 1915, 200

LOCATION

South central Bedford County, on Cove Creek, tributary of Raystown Branch of Juniata River, about 9 miles south of Bedford, and connected with it only by stage. Farming district.

WATER SUPPLY

Municipal works built in 1904.

SOURCE AND COLLECTION

A mountain run, tributary to Cove Creek, 0.5 mile southeast of borough; 51,200 gallon reservoir nearby. Water soft.

DISTRIBUTION

By gravity through main 6,600 feet long, principally 2-inch; pressures 80 to 90 pounds.

CONSUMPTION

Supply to 200 people; 40 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 6,000 gallons daily.

ROARING SPRING BOROUGH, BLAIR COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,903; increase since 1900, 559. Estimated 1915, 2,200a

LOCATION

Southern Blair County, on Halter Creek, tributary of Frankstown Branch of Juniata River; on Hollidaysburg & Morrisons Cove Branch of Pennsylvania R. R.

INDUSTRIES

Paper mill, blank book factory, flour mill and planing mill.

WATER SUPPLY

Municipal plant built 1892 and enlarged 1896. Paper mill has private supply from Roaring Spring, from which borough derives its name.

SOURCE AND COLLECTION

Two tributaries of Plum Creek, rising on west side of Loop Mountain, 2 and 3 miles northeast of borough; 10,000,000 gallon reservoir 1.5 miles northeast of borough on first stream; intake 2.5 miles northeast of borough on second stream. Combined watershed area 2,000

acres. Borough owns 412 acres at intake and 6 acres at large reservoir. Water soft. A 6-inch gravity main from reservoir, joined by 4-inch main from intake, to a 600,000 gallon distributing reservoir in borough.

DISTRIBUTION

By gravity through 8-inch main; pressures 55 to 60 pounds; 5 miles distributing mains; 41 fire hydrants.

CONSUMPTION

Supply to 2,000 people; 5,133 domestic and 10 industrial taps. Stated consumption, 70,000 gallons, 60,000 domestic and 10,000 industrial. No means of measurement.

COST AND REVENUE

Total cost of works, $60,000; annual operating expenses, approximately $1,200; gross revenue, about $4,000.

INDUSTRIAL

D. M. Bare & Co.'s paper mill has private system, using Roaring Spring, which rises in borough from limestone hill; overflow empties into Halter Creek near mill. This overflow amounts to 9,000,000 gallons daily, not including supply to paper mill. Gravity mains 6- to 10-inch from spring to paper mill.

ROBERTSDALE AND WOODVALE VILLAGES (CARBON TWP.), HUNTINGDON COUNTY

PRIVATE SUPPLY

Estimated 1915 population: Robertsdale, 1,000; Woodvale, 700.

LOCATION

Robertsdale in southern Huntingdon County, on Great Trough Creek, near terminus of East Broad Top R. R. Woodville 1 mile south, almost on boundary point of Huntingdon, Fulton and Bedford counties.

INDUSTRIES

Coal mining.

WATER SUPPLY

Private system of Rockhill Iron & Coal Co. supplies both villages. System installed primarily to supply boilers and give fire protection, but also to supply homes of company's miners.

SOURCE AND COLLECTION

A 4,000,000 gallon reservoir on Great Trough Creek, 1 mile south of Woodvale, in Bedford County, above point of contamination by mine waste; elevation 1,865. Water soft.

DISTRIBUTION

By gravity through 6-inch main, reducing to 4-inch, with fall of 15 feet to Woodvale and 75 feet to Robertsdale. A 115,000 gallon Worthington pump used to supply Woodvale. About 3 miles of mains, 40% 4-inch.

CONSUMPTION

Supply to 700 people in Woodvale and 800 in Robertsdale; 75 taps. Stated average daily consumption 85,000 gallons, 20,000 domestic and 40,000 industrial to Woodvale, and 25,000 industrial to Robertsdale. No means of measurement.

Supplies East Broad Top R. R. from 15,000 gallon tank at Robertsdale.

SAXTON BOROUGH, EAST SAXTON AND STONERTOWN, (LIBERTY TWP.), BEDFORD AND HUNTINGDON COUNTIES

SAXTON WATER COMPANY

Population 1910 census, 1,195; increase since 1900, 258. Estimated 1915, 1,400a

LOCATION

Borough in extreme northeastern part of Bedford County, on Raystown Branch of Juniata River. East Saxton east of borough, in Huntingdon County, and Stonertown west, in Bedford County; on Huntingdon & Broad Top R. R.

INDUSTRIES

Shops of Huntingdon & Broad Top Mountain R. R., large furnace, vitrified brick works, planing mill, handle works and bottling works.

WATER SUPPLY

Saxton Water Co., incorporated 1902 for Saxton Borough. First supplied railroad, and later Saxton, Stonertown, East Saxton, and Broad Top Lumber Co. in Coalmont.

SOURCE AND COLLECTION

Millers and Putts runs, tributaries of Shoups Run, east of borough. Millers Run intake 0.25 mile above mouth and 4 miles east of borough. Putts Run intake 0.125 mile above mouth and 1 mile east of borough. A storage and distributing reservoir, 2,000,000 gallons capacity, near mouth of Putts Run. Six-inch main from Millers intake and 5-inch main from Putts intake lead to reservoir. Water soft.

DISTRIBUTION

By gravity through 5-inch main; pressures 40 to 80 pounds; over 6¼ miles distributing mains, 2½- to 6-inch, 52% 6-inch.

CONSUMPTION

Supply to 1,400 people; 233 taps, 5 industrial. Average daily consumption 97,400 gallons, 22,800 domestic and 74,600 industrial. No means of measurement. Supply to Broad Top Lumber Co. in Coalmont, 2.5 miles southwest of Saxton, in Huntingdon County.

INDUSTRIAL SUPPLY

Saxton Furnace, owned by Joseph E. Throop, has private supply from Raystown Branch of Juniata River. Water pumped direct to 2,000 hp. boilers. Average daily consumption 64,000 gallons.

TYRONE BOROUGH, BLAIR COUNTY

TYRONE GAS & WATER COMPANY

BALD EAGLE WATER COMPANY

Population 1910 census, 7,176; increase since 1900, 1,329. Estimated 1915, 7,500a

LOCATION

Northern Blair County, on Little Juniata River; on Pennsylvania R. R. and Altoona & Logan Valley Electric Ry.

INDUSTRIES

Saw mills, iron and steel mills, flour mills, paper mill and iron foundries; in vicinity are iron, lead and zinc mills.

WATER SUPPLY

Tyrone Gas and Water Co., incorporated in 1865 for Tyrone and rechartered in 1893, which owns Tyrone Water Storage Co., incorporated in 1905 for Tyrone Township, holding rights on Vanscoyoc Run, tributary of Bald Eagle Creek, and The East Tyrone Water Co., incorporated 1892 for East Tyrone Borough.

Bald Eagle Water Co., incorporated 1897 for Tyrone Borough, furnishes industrial supply to West Virginia Pulp and Paper Co. mills at Tyrone and Williamsburg through separate systems.

BALD EAGLE WATER COMPANY

SOURCE AND COLLECTION

Bald Eagle Creek; 1,000,000 gallon reservoir just above mill, in northern end of borough. Gravity 18-inch and 24-inch mains to 18,000 gallon reservoir at mill. Water pumped to five Moore pressure filters, thence to four 850 gallon wooden tanks which supply mill by gravity.

CONSUMPTION

Average industrial consumption 2,500,000 gallons daily. Water discharged back into stream.

TYRONE GAS AND WATER COMPANY

SOURCE AND COLLECTION

Sinking Run, a 60,000,000 gallon reservoir, No. 1, 2 miles northwest of borough, and a 100,000,000 gallon reservoir, No. 2, just north of borough. All water very soft.

DISTRIBUTION

By gravity through 12-inch main from each source; pressures 35 to 135 pounds. Distributing mains as follows:

Size (inches),	12	10	8	6	4	3	2	Total
Length (miles),	2.3	0.6	0.7	0.8	7.3	0.7	1.5	13.9
Per cent.,	17	4	5	6	52	5	11	100

Sixty-five fire hydrants.

CONSUMPTION

Supply to 7,000 people; 1,500 taps. Stated average daily consumption 2,000,000 gallons, 90% domestic and 10% industrial. No means of measurement. There are nine meters.

WARRIORS MARK (WARRIORS MARK TWP.), HUNTINGDON COUNTY

WARRIORS MARK WATER COMPANY

Estimated population, 195

LOCATION

Northwestern corner of Huntingdon County, on Warriors Creek; on Lewisburg & Tyrone Branch of Pennsylvania R. R. Farming district.

WATER SUPPLY

Warriors Mark Water Co., incorporated 1852 for Warriors Mark; works built in 1855.

Source of supply large spring 0.5 mile northwest of borough. Water flows to village through 6-inch pipe 200 feet long, reducing to 4-inch and 1½-inch; total length about 1 mile; pressures 14 to 16 pounds.

Supply to 195 people; 52 taps. No means of measuring; assuming 20 gallons per capita, would be 3.900 gallons, all domestic.

WILLIAMSBURG BOROUGH, BLAIR COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,523; increase since 1900, 588. Estimated 1915, 1,800b

LOCATION

Eastern Blair County on Frankstown Branch of Juniata River; on Pennsylvania R. R.

INDUSTRIES

Large paper mill, blank book factory and small foundry. Increase of population due to paper mill.

WATER SUPPLY

Municipal plant with gravity supply from two tributaries of Juniata River; another tributary, Canoe Creek, held for an additional source of supply. A large limestone spring rises in borough.

SOURCE AND COLLECTION

(1) Snare Hollow Run, tributary of Juniata River; 300,000 gallon reservoir 2 miles northeast of borough.

(2) Smuckers Run, tributary of Juniata River; 1,000,000 gallon reservoir 3 miles northeast of borough.

DISTRIBUTION

By gravity through 6-inch main from small reservoir and 8-inch from large reservoir to borough; pressure 150 pounds.

CONSUMPTION

Supply to 1,800 people. Stated average daily consumption 200,000 gallons, 140,000 industrial and 60,000 domestic. No means of measurement.

SECTION No. 11

SUSQUEHANNA RIVER

LOWER JUNIATA SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

SECTION No. 11

SUSQUEHANNA RIVER—LOWER JUNIATA SUB-BASIN.

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section is in the central southern part of the State, embracing the watershed of the Juniata between its mouth and the junction of the Raystown and Frankstown branches, and includes the bulk of Mifflin and Juniata counties, with portions of Huntingdon, Centre, Snyder, Perry Franklin and Fulton. It is roughly triangular in shape, about 70 miles long from southwest to northeast and 45 miles wide and covers 1,425 square miles or 3.2% of the area of the State.

SURFACE CHARACTERISTICS

The section lies entirely in the Allegheny Mountain region, characterized by alternating ridges and valleys running from southwest to northeast. The courses of the Juniata and its tributaries generally parallel the ridges, except where they cut through these at right angles. The valley of the Kishacoquillas Creek is largely underlaid with limestone, and some other streams are so characterized to some extent, but the prevailing rocks of the basin are shales and sandstones. Important tributaries are Great Aughwick, Kishacoquillas, Tuscarora and Buffalo creeks.

POPULATION

The Lower Juniata Sub-basin contains no cities, but has 17 boroughs, the largest being Lewistown (population 8,166). Its total population in 1910 was nearly 69,000, an increase of 9% during the previous 10 years, and about 1% of the total of the State. Urban population is only 17%, and density 48 per square mile, the section being one of the least densely populated regions of Pennsylvania.

RESOURCES AND INDUSTRIES

Few mineral resources are known, this being an agricultural region. However, the steel industry is represented in the Kishacoquillas Valley above Lewistown, and minor manufacturing is conducted in the towns.

WATER SUPPLY

The quantity of water available for water supply is ample and its quality is in the main satisfactory. Of the estimated total consumption of over 22,000,000 gallons per day, nearly 18,000,000, or 81% is consumed in the Lewistown district, the heaviest user being the Standard Steel Works Co. at Burnham. Its supply is pumped from Kishacoquillas Creek, but the public supplies are almost universally gravity systems. These for the most part are comparatively small, each system supplying one or two centers. Five systems serve more than one community, of which only one, the Lewistown-Reedsville Water Co., merits special attention. It serves the Kishacoquillas Valley district with about 2,800,000 gallons per day, 36% domestic. The aggregate population served by water supply systems is about 30,000.

Next to the Standard Steel Works Co., the most important industrial user is the Pennsylvania R. R. Co., which consumes 3,860,000 gallons per day, one-third from public supplies, chiefly for locomotives on its main line.

The following tables give a summary of the water supplies in this section, both domestic and industrial; succeeding them are detailed descriptions of the water supply systems arranged alphabetically according to places supplied:

Place	County	Company	Population 1915	Population Supplied	City Company	City Municipal	Borough Company	Borough Municipal	Borough Private	Village Company	Village Private
Belleville,	Mifflin, Union Twp.,	Belleville W. Co.,	1,000	1,000						1	
Lewistown,	Mifflin,	Lewistown-Reedsville W. Co.,	23,500	17,500			1				
Burnham,	Mifflin, North Derry Twp.,										
Lewistown Jct.,	Mifflin, Granville Twp.,										
Milroy,	Mifflin, Armagh Twp.,										
Naginey,	Mifflin, Armagh Twp.,										
Reedsville,	Mifflin, Brown Twp.,										
Yeagertown,	Mifflin, W. Derry Twp.,										
Mapleton,	Huntingdon,	Jacks Mountain W. Co.,	800	600			1				
		Mapleton W. Co.,		200			1				
		J. Macklin & W. P. Stevenson,	510	30					1		
McVeytown,	Mifflin,	Mifflintown W. Co.,	950	1,100			1				
Mifflintown,	Juniata,										
Fermanagh Township (part)	Juniata,										
Millerstown,	Perry,	Municipal,	550b	530b				1			
Millerstown Station,	Perry, Greenwood Twp.,	Geo. A. Rebok,	15b	15b							1
Mt. Union,	Huntingdon,	Mount Union W. Co.,	4,300	4,300			1				
Allenport,	Huntingdon, Shirley Twp.,										
Cedarcrest,	Mifflin, Wayne Twp.,										
Newport,	Perry,	Newport Home W. Co. (David Gring and others)	2,200	2,500			1				
Oliver Township (part),	Perry,										
Patterson,	Juniata,	Patterson W. Co.	950	975			1				
Port Royal,	Juniata,	Port Royal W. S. Co.,	550b	900			1				
Milford Township (part)	Juniata,										
Turbett Township (part)	Juniata,										
Saltillo,	Huntingdon,	5 private systems,	425	100b					5		
Three Springs,	Huntingdon,	Three Springs W. Co.,	250	200			1				
Thompsontown,	Juniata,	W. S. Schlegel,	297	200					1		

bEstimated by Water Supply Commission.

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 11—Continued

Place	County	Company	Supply: Source: Surface	Supply: Source: Ground	Supply: Source: Combined	Supply: Method: Gravity	Supply: Method: Pumped	Supply: Method: Combined	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Belleville,	Mifflin, Union Twp.,	Belleville W. Co.,	1	---	---	1	---	---	450,000a	150,000a	600,000a	------
Lewistown,	Mifflin,	Lewistown-Reedsville W. Co.,	1	---	---	1	---	---	1,000,000a	1,750,000	2,750,000a	------
Burnham,	Mifflin, North Derry Twp.,											
Lewistown Jct.,	Mifflin, Granville Twp.,											
Milroy,	Mifflin, Armagh Twp.,											
Naginey,	Mifflin, Armagh Twp.,											
Reedsville,	Mifflin, Brown Twp.,											
Yeagertown,	Mifflin, W. Derry Twp.,											
Mapleton,	Huntingdon,	Jacks Mountain W. Co.,	---	---	1	1	---	---	23,600	1,400	25,000	42t
		Mapleton W. Co.,	---	1	---	1	---	---	------	------	3,000a	------
McVeytown,	Mifflin,	J. Macklin & W. P. Stevenson,	---	1	---	1	---	---	------	------	1,200b	------
Mifflintown,	Juniata,	Mifflintown W. Co.,	1	---	---	1	---	---	------	------	80,000a	------
Fermanagh Township (part)	Juniata,											
Millerstown,	Perry,	Municipal,	---	1	---	1	---	---	------	------	21,000b	------
Millerstown Station,	Perry, Greenwood Twp.,	Geo. A. Rebok,	---	1	---	1	---	---	------	------	500b	------
Mt. Union,	Huntingdon,	Mount Union W. Co.,	1	---	---	1	---	---	120,000a	80,000a	200,000a	------
Allenport,	Huntingdon, Shirley Twp.,											
Cedarcrest,	Mifflin, Wayne Twp.,											
Newport,	Perry,	Newport Home W. Co. (David Gring and others)	1	---	---	---	---	1	245,000	5,000	250,000	100t
Oliver Township (part),	Perry,											
Patterson,	Juniata,	Patterson W. Co.	1	---	---	1	---	---	------	------	*75,000a	------
Port Royal,	Juniata,	Port Royal W. S. Co.,	---	1	---	1	---	---	------	------	12,000a	------
Milford Township (part)	Juniata,											
Turbett Township (part)	Juniata,											

Saltillo,	Huntingdon,	5 private systems,	---	5	---	---	4,000b	----------	4,000b	------
Three Springs,	Huntingdon,	Three Springs W. Co.,	---	1	---	---	1,500a	----------	1,500a	------
Thompsontown,	Juniata,	W. S. Schlegel,	---	---	---	1	5,300a	2,200a	7,500a	-----

aEstimated by water companies.
bEstimated by Water Supply Commission.
tTotal.
*From Mifflintown Water Company.

RAILROAD WATER SUPPLIES, SECTION NO. 11

PENNSYLVANIA

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Middle Division				
Bailey (4 track pans),	Juniata River,	Pumped,	700,000	
Black Log,	Spring,	Gravity,	600	
Denholm,	Juniata River,	Pumped,		
	Clearview W. S. Co.,			490,000
Jackstown (4 track pans),	Juniata River,	Pumped,	900,000	
	Run,	Gravity,		
Mifflin,	Juniata River,	Pumped,		
Mill Creek,	Juniata River,	Pumped,	20,000	
Mapleton,	Scrub Run,	Gravity,	60,000	
Lewistown Jct.,	Granville Run,	Gravity,	280,000	
Longfellow,	Juniata River,	Pumped,		
	Run,	Gravity,	60,000	
Narrows (4 track pans),	Clearview W. S. Co.,			750,000
	Juniata River,	Pumped,		
Newport,	Spring,	Gravity,	10,000	
Ryde No. 1,	Juniata River,	Pumped,		
	Run,	Gravity,	200,000	
Ryde No. 2,	Juniata River,	Pumped,		
	Run,	Gravity,	123,000	
Thompsontown,	Juniata River,	Pumped,		
	Spring,	Gravity,	200,000	
Sunbury & Shamokin Division				
Mann,	Reedsville W. Co.,			88,500
Shindle,	Run,	Gravity,	4,700	
Lewistown Jct.,	From Middle Div'n P. R. R.		49,000	

EAST BROAD TOP RAILROAD AND COAL CO.

Mt. Union,	Mt. Union W. Co.,			25,000
Orbisonia,	Black Log Creek,	Pumped,	50,000	
Saltillo,	Spring Run,	Gravity,	25,000	
Shade Gap,	Spring Run,	Gravity,	5,000	

KISHACOQUILLAS VALLEY

Belleville,	Belleville W. Co.,			2,000
Mt. Hope,	Springs,	Gravity,	2,000	

NEWPORT AND SHERMANS VALLEY

Newport Station,	Newport Home Co., (Emergency only)			500
Newport shops, Water plug station,	Mountain Spring,	Gravity,	3,000	

TUSCARORA VALLEY

Ross Farm,	Mountain stream,	Gravity,	3,500	
Spruce Hill,	Mountain stream,	Gravity,	3,000	
Totals,			2,698,800	1,356,000

INDUSTRIAL WATER SUPPLIES, SECTION NO. 11 (MISCELLANEOUS COMPANIES

Does Not Include All the Smaller Companies

Place	Company	Source	Method	Industrial consumption (gallons per day)	Daily amount of product	Returned to stream (%)	Increase in temp. °F
Newport, Perry County,	Elk Tanning Co.,	Juniata River,	Pumped,	200,000			
Burnham, Mifflin County,	Standard Steel Works Co., Lewistown	Kishacoquillas Creek, Reedsville W. Co.	Pumped,	c 11,750,000 s 1,100,000	343 tons	100	24
	Logan Iron & Steel Co., Lewistown	Kishacoquillas Creek, Reedsville W. Co.	Pumped, Emergency,	cs 2,250,000	129 tons	94	12
Mt. Union, Huntingdon County	Harbison-Walker Refractories Co.	Juniata River & small trib.,	Pumped,	75,000	450 tons	10	to 110
Total from private systems,				15,375,000			

sWater for steam purposes
cWater for cooling or condensing purposes

BELLEVILLE (UNION TWP.), MIFFLIN COUNTY

BELLEVILLE WATER COMPANY

Estimated 1915 population, 1,000.

LOCATION

Northwestern Mifflin County, near headwaters of Kishacoquillas Creek, terminus of Kishacoquillas Valley R. R.

INDUSTRIES

Farming country; machine shops, foundry, carpet factory, coach shops, two planing mills and flour mill.

WATER SUPPLY

Belleville Water Co., incorporated 1902 for Union Township.

SOURCE AND COLLECTION

Small intake dam on Back Mountain stream, 1.75 miles northwest of village; watershed area 6 square miles. About 1.75 miles of 6-inch pipe to 18,000 gallon circular reservoir near village. Water soft.

DISTRIBUTION

By gravity through 2 miles of 4-inch main with 2-inch laterals; pressures 80 to 100 pounds; 8 fire hydrants, 4-inch.

CONSUMPTION

About 1,000 persons in village and along pipe line supplied; 289 taps. Consumption not known; assuming 75 gallons per capita, would be 75,000 gallons daily.

LEWISTOWN BOROUGH AND NEIGHBORING VILLAGES, MIFFLIN COUNTY

LEWISTOWN-REEDSVILLE WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Lewistown,	8,166	3,715	10,340x
Lewistown Junction (Granville Twp.),	2,096	362	2,300b
Reedsville (Brown Twp.),	1,885	207	2,000b
Burnham (West Derry Twp.),			
Yeagertown (West Derry Twp.),	5,730	981	6,200b
Milroy (Armagh Twp.),			
Naginey (Armagh Twp.),	2,411	24	2,420b
Total,	20,288		23,260b

LOCATION

Central Mifflin County, in valley of Kishacoquillas Creek; on Middle, Milroy and Lewistown divisions of Pennsylvania R. R. and Lewistown & Reedsville Electric Ry.

INDUSTRIES

Lewistown, knitting mill, ice and storage company, silk mill, gas and electric company, planing and flour mills. Reedsville residential settlement. Burnham, residents employes of Standard Steel Co., subsidiary of Baldwin Locomotive Works, and main supporting industry, and Logan Iron and Steel Co. Yeagertown, Milroy and Naginey, farming communities; axe factory at Yeagertown.

WATER SUPPLY

Lewistown-Reedsville Water Co., incorporated 1908 as merger of Lewistown Water Co., Granville Water Co., Minehart Run Water Co., Citizens Water Co., of Lewistown, and Reedsville Water Co.

SOURCE AND COLLECTION

Intakes on four streams which rise on sandstone hills. Streams disappear through underground passages in limestone in main valley and reappear at points below.

Source	Location of intake	Elevation (feet)	Drainage area (sq. mi.)
Treaster Valley Run (no storage)	10 miles north of Lewistown,	810	14.7
Laurel Creek (no storage),	16 miles north of Lewistown,	955	20.0
Coopers Gap Run (no storage),	8 miles northwest of Lewistown,		5.3
Minehart Run,	5 miles southwest of Lewistown and just south of Granville; 8,000,000 gallon storage reservoir	850	7.0

DISTRIBUTION

By gravity as follows: From (1) 12-inch line down creek, with branch to Naginey, 4 miles below, and 10-inch line south 3.5 miles to Reedsville; 14-inch, reducing to 12-inch and 10-inch, line from (2) south to Milroy and Reedsville; 10-inch main from (3) south 3 miles to Reedsville, connecting with Laurel Run and Treaster Valley mains.

From Reedsville 12-inch main to point below Standard Steel Works and Logan Iron and Steel Works, Burnham; thence 10-inch line to Lewistown, where it connects with Minehart Run and Lewistown reservoir and en route supplies Burnham, Yeagertown and a 2,000,000 gallon distributing reservoir at Yeagertown, elevation 707.

A 10-inch main from (4), 5 miles northeast to Lewistown, connected to 1,250,000 gallon distributing reservoir at Lewistown, elevation 682. A 1,250,000 gallon regulating reservoir at Reedsville not used since new Lewistown reservoir was built, being only 25 feet higher.

No data available as to length and size of mains. Reported that in 1906 there were from 15 to 20 miles of 4, 6 and 8 and 10-inch mains in Lewistown plant and 25 to 30 miles of 4, 6, 8, 10 and 12-inch mains in the Reedsville plant; 203 fire hydrants, 4-inch.

CONSUMPTION

About 17,500 persons supplied; 3,464 taps, 35 metered. Average daily consumption 2,750,000 gallons, 1,750,000 industrial, metered, 1,000,000 domestic estimated; maximum as determined by pitometer test August, 1912, 3,250,000 gallons, including leakage in distributing system.

MAPLETON BOROUGH, HUNTINGDON COUNTY

MAPLETON WATER COMPANY
JACKS MOUNTAIN WATER COMPANY

Population 1910 census, 752, increase since 1900, 140. Estimated 1915, 800a

LOCATION

Eastern Huntingdon County, on south bank of Juniata River; on Middle Division of Pennsylvania R. R. Range of elevation in district served 60 feet.

INDUSTRIES

Glass sand works and fire brick works.

WATER SUPPLY

Mapleton Water Co., incorporated 1906 for Mapleton Borough; operated since 1850 as private system; Jacks Mountain Water Co., incorporated 1905 for Mapleton Borough.

MAPLETON WATER COMPANY

SOURCE AND COLLECTION

Two springs, 0.25 mile east of borough, in Jacks Mountain, water piped to 20,000 gallon reservoir nearby.

DISTRIBUTION

By gravity through 0.5 mile 2-inch and 0.5 mile 1½-inch mains; pressure 30 pounds. No fire hydrants.

CONSUMPTION

Stated average daily consumption about 3,000 gallons; 65 taps. No means of measurement.

JACKS MOUNTAIN WATER COMPANY

SOURCE AND COLLECTION

(1) Spring rising in eastern part of borough, on Jacks Mountain, piped 600 feet west through 2-inch pipe to 30,000 gallon distributing reservoir.

(2) Intake dam on Scrub Run, 1.25 miles south of borough; watershed area 2.2 square miles. Water piped through 1 mile of 4-inch main to above distributing reservoir. Spring about 144 feet, and dam on Scrub Run about 256 feet, above borough. Water soft.

DISTRIBUTION

By gravity through 0.9 mile 4-inch main and 1 mile 2-inch; pressures 56 to 115 pounds; no fire hydrants.

CONSUMPTION

About 600 persons in western and southern parts of borough supplied; 131 taps. Average daily consumption estimated from fall in reservoir, 25,000 gallons, maximum 30,000 gallons; 1,400 gallons industrial, through two taps, both metered.

McVEYTOWN BOROUGH, MIFFLIN COUNTY

PRIVATE SUPPLY

Population 1910 census, 514; decrease since 1900, 6. Estimated 1915, 510b

LOCATION

Southern Mifflin County, on West Branch of Juniata River; across from Pennsylvania R. R.

INDUSTRIES

Mining of sand used in glass manufacturing; rug factory.

WATER SUPPLY

Private system of James Macklin and W. P. Stevenson. The Pennsylvania Glass Sand Co. has private system.

SOURCE AND COLLECTION

Five springs on hillside, west of borough, with 4-inch pipes to 20,000 gallon reservoir 1.5 miles from town; most distant spring 1,500 feet from reservoir. Pump from old sand pit into reservoir through 3-inch main from June to October, when springs fail. Water soft.

DISTRIBUTION

By gravity through 2-inch pipe; head 113 feet. No fire hydrants.

CONSUMPTION

About six families served. No means of measuring consumption; assuming 40 gallons per capita and 30 persons supplied, would be 1,200 gallons daily.

MIFFLINTOWN BOROUGH AND FERMANAGH TOWNSHIP JUNIATA COUNTY

MIFFLINTOWN WATER COMPANY

Population of Mifflintown, 1910 census, 954; increase since 1900, 1. Estimated 1915, 950a

LOCATION

Mifflintown county seat, in central Juniata County, on both banks of Juniata River; on Middle Division of Pennsylvania R. R.

INDUSTRIES

Farming community; hosiery mill, carpet factory, and creamery, ice plant.

WATER SUPPLY

Mifflintown Water Co., incorporated 1891 for Mifflintown Borough. Sells water to Patterson Water Co., supplying Patterson Borough; stock held by same persons who control Mifflintown Water Co.

SOURCE AND COLLECTION

Two dams on Macedonia Run, in Shade Mountain, 5 miles northwest of borough and 1.5 miles below source; upper dam about 275 feet above lowest part of borough, capacity 100,000 gallons, connected to 10,000 gallon reservoir below, used only for emergencies; watershed area about 2 square miles. Total length of lower supply mains 4 miles, principally 6-inch. A 12-inch main leading from lower dam is connected to 4-inch main from upper. Water soft.

DISTRIBUTION

By gravity; mains, principally 4-inch, as follows:

Size (inches),	8	6	4	1 to 2	Total
Length (miles),	0.2	0.4	0.9	0.6	2.1

Pressures 70 to 100 pounds; 12 fire hydrants, 8-inch. Water backs up into 450,000 gallon reservoir across river and 0.5 mile west of Patterson Borough, which is supplied from same source.

CONSUMPTION

About 1,100 persons supplied; 260 taps in borough and 12 taps along pipe line in township; none metered. Stated average daily consumption 80,000 gallons. No means of measurement.

Furnishes about 75,000 gallons daily to Patterson Borough through mains of Patterson Water Co.

MILLERSTOWN BOROUGH, PERRY COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 549; increase since 1900, 6. Estimated 1915, 550b

LOCATION

Northern Perry County, on east bank of Juniata River, across river from Middle Division of Pennsylvania R. R. Built-up portion on hillside at average elevation 425 feet.

INDUSTRIES

Farming community, tannery, shirt factory.

WATER SUPPLY

Six springs along small stream on Slaughterback Hill, 1.5 miles north of borough, at elevations 671 to 844. Two-inch lines from each spring to 3-inch line leading to 200,000 gallon storage and distributing reservoir 0.5 mile north of borough, at elevation 657.

DISTRIBUTION

By gravity through 8-inch, reducing to 6-inch main; pressure 100 pounds; distributing system 4,500 feet 4-inch and 6-inch pipe.

CONSUMPTION

About 530 persons supplied; 575 taps. No means of measuring consumption; assuming 40 gallons per capita would be about 21,000 gallons, exclusive of quantity used in tannery.

PROPOSED SUPPLY

Spring 1 mile northeast of borough, rising in, and 300 feet from mouth of, an abandoned iron ore mine tunnel, known as Mine No. 9 of Reading Iron Co.; flow about 58,000 gallons daily. About 100 feet lower than present reservoir, and will have 4-inch gravity main 5,000 feet long to supply line from reservoir.

MILLERSTOWN STATION, PERRY COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 15.

LOCATION

Northern Perry County, on west bank of Juniata River, and directly across river from Millerstown; on Middle Division of Pennsylvania R. R.

WATER SUPPLY

Private system owned by George A. Rebok, for supply of small real estate development. Source is spring on hillside 0.75 mile west of river, issuing from abandoned iron mine tunnel; 3-inch pipe 50 feet to 4,600 gallon reservoir.

Distribution by gravity through 2-inch pipe to three houses. No means of measuring consumption; assuming 30 gallons per capita, would be 500 gallons daily.

MT. UNION BOROUGH AND NEIGHBORING VILLAGES, MIFFLIN AND HUNTINGDON COUNTIES

MT. UNION WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915	Supplied
Huntingdon Co.:				
Mt. Union Borough,	3,338	2,252	3,900a	3,900a
Allenport Village,				350a
Mifflin Co.:				
Cedarcrest Village,				50a

LOCATION

Mt. Union and Allenport in eastern Huntingdon County, and Cedarcrest in southwest corner Mifflin County, on Juniata River; on Middle Division of Pennsylvania R. R.

INDUSTRIES

Tie treating plant of Pennsylvania R. R., tannery, three large fire brick works, extract plant, planing mill, ice plant, machine shop, foundry and underwear factory.

WATER SUPPLY

Mt. Union Water Co., incorporated 1899 for Mt. Union Borough; control of company changed hands July 1, 1914.

SOURCE AND COLLECTION

(1) Singers Gap Run, tributary of Hill Valley Creek, which enters Juniata River just below borough; a 60,000 gallon intake reservoir 5.5 miles southwest of borough, at elevation 1,030; watershed area 3.6 square miles.

(2) Jacks Spring Run, tributary of Juniata River, above borough. Three reservoirs about 2.25 miles west of borough. Upper Jacks Run 60,000 gallon reservoir, at elevation 852; Jack Run 5,000 gallon intake just below, elevation 780; lower Jacks Run 60,000 gallon reservoir, at elevation 640.

In very dry weather about 70,000 gallons issue from rocks too low to get into reservoirs; pumped from stream at point below Jacks Run reservoir into mains below Upper Jacks Run reservoir by 70 g. p. m. triplex pump driven by 7½ hp. electric motor.

(3) Three small intakes on Lucy Furnace Run and a tributary of Dark Hollow run as follows:

	Capacity gallons	Elevation
Dark Hollow Run,	1,000,000	860
Upper Furnace Run,	200,000	780
Lower Furnace Run,	1,000,000	670

Total watershed area about 3.1 square miles. Water soft.

DISTRIBUTION

Water delivered to distributing system from (1) by gravity through 5.25 miles of 12-inch, reducing to 10-inch and 8-inch mains; from (2) by gravity and pumping through 2.25 miles of 6-inch main; from (3) by gravity through 1.9 miles of 10-inch, reducing to 8-inch, 6-inch and 4-inch mains. Distributing mains as follows:

Size (inches),	6	4	1 to 2	Total
Length (miles),	2	4½	5	11.5
Per cent.,	17	39	44	100

Pressures 35 to 125 pounds; 58 fire hydrants, 4-inch.

CONSUMPTION

About 4,300 persons supplied; 870 taps, as follows: Mt. Union, 3,900, 810 taps; Allenport, 350, 50 taps; Cedarcrest, 50, 10 taps.

Average daily consumption, determined by metering principal consumers and estimating balance, 200,000 gallons, 60% domestic and 40% industrial. There are 36 taps metered, 8 industrial; metered consumption 60,000 gallons industrial, 40,000 gallons domestic.

HISTORICAL

New syndicate, headed by Albert J. Walker, Engineer of Huntingdon Water Co., bought plant as of July 1, 1914.

NEWPORT BOROUGH AND OLIVER TOWNSHIP, PERRY COUNTY

NEWPORT HOME WATER COMPANY
(David Gring and others)

Population of Newport, 1910 census, 2,009; increase since 1900, 275. Estimated 1915, 2,200

LOCATION

Northern Perry County, on west bank of Juniata River, at mouth of Little Buffalo Creek; along Middle Division of Pennsylvania R. R. Range in elevations, 50 feet.

INDUSTRIES

Industrial community; iron furnace, extract plant, hosiery mill, tannery, shirt factory, flour mill and brick plant.

WATER SUPPLY

Newport Home Water Co., incorporated 1893 for Newport; controlled by David Gring and others, Harrisburg, Pa.

SOURCE AND COLLECTION

(1) Intake dam on Howe Run, 4 miles northeast of borough, on Buffalo Mountain; several springs nearby piped to intake; watershed area 0.5 square mile. An 8-inch main from dam to 300,000 gallon distributing reservoir on hill 0.75 mile northeast of Juniata River. Springs 280 feet higher, and reservoir about 210 feet higher, than lowest point in borough.

(2) Auxiliary supply in dry seasons by pumping from Juniata River into sedimentation basin, thence by gravity through 250,000 gallon mechanical gravity filter one unit, into 8,000 gallon clear water basin; thence pumped directly into mains, excess backing up into the 300,000 gallon distributing reservoir. This supply used intermittently during 3 months every summer.

Pumping station on opposite side of river from borough; equipment two 250,000 gallon triplex pumps, two 15 hp. Otto gas engines. Water soft.

DISTRIBUTION

By gravity from reservoir and by pumping from filters; supply mains pass under Juniata River. Supply and distributing mains as follows:

Size (inches),	10	8	6	4	Total
Length (miles),	0.1	4.0	2.0	2.0	8.1

Static pressure in borough 85 pounds; 28 fire hydrants, 4-inch.

CONSUMPTION

About 2,500 persons supplied; 526 taps, 18 metered. Stated average daily consumption, measured by meter pump displacement, etc., 250,000 gallons, maximum 300,000 gallons; 98% domestic and 2% industrial; metered daily consumption 410 gallons industrial and 6,000 gallons domestic. Company furnishes entire supply to Newport & Shermans Valley R. R. in Newport.

INDUSTRIAL

Elk Tanning Co. obtains 200,000 gallons daily for tannery by pumping from Juniata River through 6-inch pipe.

Source of supply for Oak Extract Co. operation not known.

PATTERSON BOROUGH, JUNIATA COUNTY

PATTERSON WATER COMPANY

Population 1910 census, 885; increase since 1900, 68. Estimated 1915, 950

LOCATION

Central Juniata County, directly across Juniata River from Mifflintown; on Middle Division of Pennsylvania R. R.

INDUSTRIES

Flour mill, ice plant and railroad shops.

WATER SUPPLY

Patterson Water Co., incorporated 1891 for Patterson; majority of stock held by same persons who control Mifflintown Water Co.

SOURCE AND COLLECTION

Supplied from same system as Mifflintown by gravity through 8-inch pipe under river. Water soft.

DISTRIBUTION

By gravity; distributing mains as follows:

Size (inches),	8	4	1 to 2	Total
Length (miles),	0.3	0.8	0.9	2.0

Pressures 75 to 110 pounds; 8 fire hydrants, 8-inch.

CONSUMPTION

About 975 persons, including several families outside of borough, supplied through 185 taps. Stated average daily consumption 75,000 gallons. No means of measurement.

PENNSYLVANIA RAILROAD

CLEARVIEW WATER SUPPLY COMPANY

LOCATION

Main line Pennsylvania R. R., traverses Section No. 11 in an east and west direction, following south bank of Juniata River from elevation 360.6 at mouth, through Perry, Juniata, Mifflin and Huntingdon counties, crossing to north side of river at Ryde, 61.4 miles above its mouth.

WATER SUPPLY

Clearview Water Supply Co., incorporated 1905 for Milford Township, Juniata County. This company has one of eight systems built by the American Pipe Mfg. Co. of Philadelphia for supply to Pennsylvania R. R. from Philadelphia to Pittsburgh. (Complete description included under Pennsylvania R. R., Section No. 12.)

SOURCE AND COLLECTION

Licking Creek, tributary to Tuscarora Creek, from north, in Juniata County; 59,400,000 gallon storage reservoir, 11 miles above mouth.

DISTRIBUTION

By gravity through 16-inch main, 5.178 miles northeast to 2,000,000 gallon distributing reservoir at Denholm and continuing as 12-inch main, 3.286 miles north, to 1,000,000 gallon distributing reservoir at Narrows Station.

CONSUMPTION

Average supply, entirely industrial, to railroad, at following places: Denholm, 490,000 gallons; Narrows, 750,000 gallons.

PORT ROYAL BOROUGH AND PARTS OF TURBETT AND MULFORD TOWNSHIPS, JUNIATA COUNTY

THE PORT ROYAL WATER SUPPLY COMPANY

Population of Port Royal, 1910 census, 535; increase since 1900, 11.
Estimated 1915, 1,150

LOCATION

Central Juniata County, on south bank of Juniata River, at mouth of Tuscarora Creek; on Middle Division of Pennsylvania R. R.

INDUSTRIES

Farming region; several saw mills nearby.

WATER SUPPLY

The Port Royal Water Supply Co., incorporated 1910 for Port Royal.

SOURCE AND COLLECTION

Yocum Hollow, Simmers and Ore Bank Springs, north side of Tuscarora Mountain, 3.5 miles southeast of borough; terra cotta pipe to 70,000 gallon reservoir, elevation 720.

DISTRIBUTION

By gravity through 3.25 miles of 6-inch main; pressures 112 to 133 pounds; distributing mains, 0.3 mile 6-inch and 0.8 mile 4-inch; 16 fire hydrants, 3-inch.

CONSUMPTION

Supply to about 900 persons in Port Royal and in Turbett and Mulford townships; 184 taps. Stated average daily consumption 12,000 gallons, all domestic. No means of measurement.

SALTILLO BOROUGH, HUNTINGDON COUNTY

FIVE PRIVATE SUPPLIES

Population 1910 census, 410; increase since 1900, 33. Estimated 1915, 425

LOCATION

Southern Huntingdon County, on Three Springs Creek, tributary of Aughwick Creek; on East Broad Top R. R.

INDUSTRIES

Community of lumbermen, laborers, miners and farmers; grist mill.

WATER SUPPLY

Five private systems, supplying from 2 to 10 houses each. Two described in detail:

S. W. KIMMEL SYSTEM

SOURCE AND COLLECTION

Two springs on hillside, east of borough; water collected in 1,000 gallon reservoir.

DISTRIBUTION

By gravity; pressures 5 to 20 pounds.

CONSUMPTION

Ten families supplied. No means of measuring consumption; assuming 30 gallons per capita and 50 persons, would be 1,500 gallons daily.

PAUL RUPERT SYSTEM

SOURCE AND COLLECTION

Spring water collected in 225 gallon reservoir; flows about 500 gallons daily.

DISTRIBUTION

By gravity, at 40 pounds pressure.

CONSUMPTION

Supply to three houses. Consumption averages 75 gallons daily. No means of measurement.

THOMPSONTOWN BOROUGH, JUNIATA COUNTY

PRIVATE SUPPLY

Population 1910 census, 293; increase since 1900, 20. Estimated 1915, 297a

LOCATION

Eastern Juniata County, on small tributary of Juniata River, 1 mile north of junction; Pennsylvania R. R. station on opposite side of Juniata River.

INDUSTRIES

Agriculture; flour mill, creamery, planing mill.

WATER SUPPLY

Private system of W. E. Schlegel, installed 1910.

SOURCE AND COLLECTION

(1) Three Holman springs; water collected and delivered by gravity through 4-inch pipe 180 feet to 55,000 gallon distributing reservoir; watershed area 80 acres.

(2) Two 6-inch drilled wells, 79 feet deep, near reservoir; water raised by 58 g. p. m. duplex pump, belt-connected to 3 hp. gasoline engine; source used only 2 months in year. Water soft.

DISTRIBUTION

Water delivered by gravity through about 1 mile of 6-inch, reducing to 5-inch, main from reservoir to borough; distributed through about 0.8 mile 4-inch, 2-inch and 1-inch pipes.

CONSUMPTION

Supply to 200 persons; 67 taps. Stated average daily consumption, 7,500 gallons; maximum 8,500 gallons; 70% domestic. No means of measurement.

THREE SPRINGS BOROUGH, HUNTINGDON COUNTY

THE THREE SPRINGS WATER COMPANY

Population 1910 census, 248; increase since 1900, 52. Estimated 1915, 250a

LOCATION

Southern Huntingdon County, on Three Springs Creek, tributary of Great Aughwick Creek; on East Broad Top R. R.

INDUSTRIES

Community of miners, laborers and lumbering men.

WATER SUPPLY

The Three Springs Water Co., incorporated 1910 for Three Springs; supplied water as private concern from 1907 to 1910.

SOURCE AND COLLECTION

Two springs 2,100 feet north in mountain gap; upper spring flows about 1,200 gallons daily; piped to 3,200 gallon reservoir at lower spring.

DISTRIBUTION

By gravity through 0.8 mile of mains, principally 1-inch and 2-inch; pressure 50 pounds. No fire hydrants.

CONSUMPTION

About 200 persons served; 26 outside hydrants, ¾-inch. Stated daily consumption 1,500 gallons, all domestic. No means of measurement.

SECTION No. 12.

SUSQUEHANNA RIVER

LOWER MAIN SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

Table of Industrial Water Supplies (Coal Companies)

SECTION No. 12.

SUSQUEHANNA RIVER—LOWER MAIN SUB-BASIN.

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section comprises that part of the watershed of the Susquehanna between the mouth of the Juniata River and the Maryland line, and includes all of York County, nearly all of Lancaster, Lebanon, and Cumberland counties, with portions of Dauphin, Berks, Schuylkill, Perry, Franklin, Adams and Chester. It is about 100 miles long from west to east, and has a maximum width of about 70 miles from north to south, the area being 4,121 square miles. The district includes the cities of Harrisburg, York, Lancaster and Lebanon, with many industries as well as much of the best agricultural land in the State.

SURFACE CHARACTERISTICS

A narrow strip along the north edge of the section, constituting about 10% of its area, lies in the Allegheny Mountains. The rest is in the Piedmont plateau, and is gently rolling, although broken by a range of hills parallel with the Alleghenies and bounding on the south the well-known Cumberland and Lebanon valleys. These are largely underlaid with limestone of the Trenton formation, with outcrops in a wide belt in Lancaster County, the presence of these rocks having a decided effect on the composition of the waters draining their localities. The principal limestone streams are the Swatara, Conestoga and Pequea creeks, on the east side of the Susquehanna, and the Conodoguinet and Yellow Breeches creeks on the west, while the Octoraro on the east, and the Conewago, Codorus and Muddy creeks on the west, drain territory chiefly underlaid by sandstones, slates and schists.

POPULATION

The population of this section in 1910 was about 587,000, an increase of 11% in the preceeding 10 years. This is about 8% of the total for the State, whereas the section area is about 9.1% of the total. The urban population is 40% of the total, and the density is 142 per square mile.

RESOURCES AND INDUSTRIES

The natural resources are chiefly of an agricultural character, although magnetic iron ore is mined in Lebanon County and slate is quarried extensively in southern York. The district as a whole is remarkable for the development of agriculture, Lancaster County having beeen reported recently as second in the United States in the value of its products. At Steelton, Harrisburg and Lebanon are extensive iron and steel works. Machinery, textiles, cigars, paper and many other commodities are manufactured both in the cities and the smaller towns. The section is noted for its water power, the developments on the Susquehanna River being widely known, constituting the bulk of the developed power in Pennsylvania.

WATER SUPPLY

The section has an unusually abundant water supply, due to the great drainage area of the Susquehanna and the magnitude and comparative regularity of its tributaries. Less satisfactory is the quality of the water, as is shown by the prevalence of filtration, about one-half of the total population and consequently most of the urban population, being served with filtered water. The waters are generally fit for industrial uses without treatment, although those from the limestone streams are, of course, somewhat hard.

The principal consumption is on the Susquehanna at Harrisburg and Steelton, reaching nearly 60% of the total for the section, chiefly due to the Pennsylvania Steel Co.'s works at the latter place. The supplies of Lebanon, Lancaster and York furnish 14% more, and the rest of the consumption is divided among the lesser municipalities and minor industries. The principal supplies are obtained from the Susquehanna and its major tributaries, principally by pumping.

As shown hereinafter, 79 public water supply systems are in operation, of which 48 are controlled by corporations, 23 by municipalities and 8 by private parties. The cities of Harrisburg, Lancaster and Lebanon are, however, in the second class, with about 22% of the total population of the section and 55% of the urban population, and the third class includes only small systems.

The aggregate number of persons supplied by water supply systems is about 361,000. A considerable population is supplied by companies that cover several centers, six of which companies being of special importance. The Lebanon Valley Consolidated Water Co. supplies several communities in the vicinity of Lebanon; the Paxtang Consolidated Water Co., several suburban towns east of Harrisburg; the Riverton Consolidated Water Co., the eastern end of Cumberland County, the Hanover and McSherrystown Water Co. in these and adjoining towns, the York County Consolidated Water Co. serves Dal-

lastown, Windsor and Yoe, and the Middletown and Swatara Consolidated Water Co. operates in and near Middletown. These six systems, four of which are under one financial control, supply in the aggregate 51,300 people with about 4,840,000 gallons per day, this quantity being a material part of the public consumption of more than 33,000,000 gallons.

The total estimated consumption of the district is somewhat less than 95,000,000 gallons per day. Consumption by railroads reporting is 8,881,000 gallons, of which 5,825,000 gallons are supplied by the roads themselves, and the rest, or 3,055,000 gallons obtained from public systems. The reported private industrial supplies total nearly 55,000,000 gallons per day, the principal items being 40,000,000 at Steelton, 4,300,000 at York Haven, 3,300,000 at Lebanon, 3,000,000 at Spring Grove, York County, and about 2,000,000 gallons at York.

The following tables give a summary of the water supplies in this section, both domestic and industrial, and succeeding them are detailed descriptions of the water supply systems, arranged alphabetically according to places supplied:

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 12

Place	County	Company	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Akron,	Lancaster,	Municipal,	750	400				1			
Annville,	Lebanon, South Annville Twp.,	Annville W. Co.,	2,500	1,000						1	
Arendtsville,	Adams,	Arendtsville W. Co.,	460	308			1				
Aspers,	Adams, Menallen Twp.,	Aspers W. Co.,	200	200						1	
Atglen,	Chester,	Atglen W. Co.,	600	500			1				
Bendersville,	Adams,	Municipal,	365	365				1			
Biglerville,	Adams,	Biglerville W. Co.,	610	350			1				
Blackwood,	Schuylkill, Reilly Twp.,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)	600	600						1	
Blain,	Perry,	Municipal,	326	326				1			
Blue Ball,	Lancaster, East Earl Twp.,	Private, Peter E. Shirk,	400	150 b							1
Boiling Springs,	Cumberland, S. Middleton Twp.,	The Boiling Springs W. Co.,	800	800						1	
Carlisle,	Cumberland,	Carlisle Gas and Water Co.,	11,030	7,000			1				
Cleona,	Lebanon, N. Lebanon Twp.,	Cleona W. Co.,	500	500						1	
Christiana,	Lancaster,	Christiana Gravity W. Co.,	1,100	820			1				
Columbia,	Lancaster,	Columbia W. Co.,	10,960 x	12,000			1				
Dallastown,	York,	York County Cons. W. Co.,	3,500	2,800			1				
Windsor,	York,										
Yoe,	York,										
Dauphin,	Dauphin,	Dauphin Cons. W. Co.,	3,000	2,200			1				
Enola,	Cumberland, E. Pennsboro Twp.,	(Pennsylvania R. R. Co.),	1,600	1,600						1	
Delta,	York,	Municipal,	980 b	500				1			
Denver,	Lancaster,	Municipal,	950 b	600 b				1			
Dillsburg,	York,	Dillsburg W. Co.,	900	675			1				
Dover,	York,	Municipal,	625	400				1			
Duncannon,	Perry,	Trout Run W. Co.,	1,500 b	1,600			1				
Elizabethtown,	Lancaster,	Elizabethtown W. Co.,	3,030	2,000			1				
Emigsville,	York,	Private, E. K. Emig,	500	200							1
Ephrata,	Lancaster,	Municipal,	3,560 b	2,500				1			
Florin,	Lancaster, East Donegal and Mt. Joy Twp.	Florin W. Co.,	1,000 b	500						1	
Fredericksburg,	Lebanon, Bethel Twp.,	Fredericksburg W. Co.,	590	316						1	
Glen Rock,	York,	Municipal,	1,400	700				1			
		Private, Jos. Dice,		40					1		

Hellam,	York,	Hellam W. Co.,	600	450			1			
Hellam Township (part)	York,									
Hanover,	York,	Hanover & McSherrystown W. Co. (David Gring & others)	9,000	8,500			1			
Conewago Twp. (part),	Adams,			500						
McSherrystown,	Adams,		2,000	2,000						
Penn Twp. (part),	York,			1,500						
Harrisburg,	Dauphin,	Municipal,	70,754 x	70,754		1				
Heights,	Lebanon,	Heights W. Co.,							1	
Hershey,	Dauphin, Derry Twp.,	Hershey W. Co.,	1,200	1,000					1	
Derry Church,	Dauphin, Derry Twp.,									
Highspire,	Dauphin,	Highspire W. Co. (Paxtang Cons. W. Co.) (David Gring and others)	2,000	1,430			1			
Hummelstown,	Dauphin,	Paxtang Cons. W. Co. (David Gring and others)	14,900	13,450			1			
Paxtang,	Dauphin,									
Penbrook,	Dauphin,									
Pa. State Lunatic Hos.	Dauphin, Susquehanna Twp.,									
Pleasant View,	Dauphin, Susquehanna Twp.,									
Progress,	Dauphin, Susquehanna Twp.,									
Rutherford Heights,	Dauphin, Swatara Twp.,									
Lancaster,	Lancaster,	Municipal,	56,269 x	60,000		1				
Lancaster, suburb of,	Lancaster, Manheim Twp.,	Manheim Twp. W. Co.,	300	65					1	
Lebanon,	Lebanon,	Municipal,	21,000	21,000		1				
Lebanon, Independent,	Lebanon,	Lebanon Valley Cons. W. Co. (David Gring and others)	2,900	12,650			1			
Annville Twp. (part),	Lebanon,		2,500							
Avon,	Lebanon, S. Lebanon Twp.,		350							
East Lebanon,	Lebanon, N. Lebanon Twp.,		2,600							
Hebron,	Lebanon, S. Lebanon Twp.,		1,400							
Jonestown,	Lebanon,		600			—				
N. Annville Twp. (part)	Lebanon,		1,200							
N. Londonderry Twp. (part)	Lebanon,		300							
Palmyra,	Lebanon,		3,200							
S. Annville Twp. (part)	Lebanon,		800							
Lititz,	Lancaster,	Municipal,	2,300	2,800				1		
Manheim,	Lancaster,	Manheim W. Co.,	2,500	2,400			1			
Marietta,	Lancaster,	Marietta Gravity W. Co.,	2,000 b	2,000			1			
E. Donegal Twp. (part)	Lancaster,									
Marysville,	Perry,	Marysville W. Co.,	2,000	1,800			1			
Mechanicsburg,	Cumberland,	Mechanicsburg Gas & Water Co.,	5,000	4,000			1			
Middletown,	Dauphin,	Middletown & Swatara Con. W. Co. (Paxtang Cons. W. Co.) (David Gring and others)	6,000	4,000			1			
Royalton,	Dauphin,									
Mt. Gretna,	Lebanon,	Private, Mt. Gretna W. Co. (unincorporated)	1,250	1,250						1
Mt. Holly Springs,	Cumberland,	Mt. Holly W. Co.,	1,200	1,000			1			
Mt. Joy,	Lancaster,	Municipal,	2,500	2,300				1		
Mountville,	Lancaster,	Municipal,	604	600				1		
New Bloomfield,	Perry,	Bloomfield Water & Sewer Co.,	760	600			1			

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 12—Continued

Place	County	Company	Population 1915	Population Supplied	City Company	City Municipal	Borough Company	Borough Municipal	Borough Private	Village Company	Village Private
New Cumberland,	Cumberland,										
Bella Vista,	York, Fairview Twp.,										
Camp Hill,	Cumberland,										
Dale Estate,	Cumberland, E. Pennsboro Twp.,										
Elkwood,	Cumberland, Lower Allen Twp.,										
Hillside,	Cumberland, Lower Allen Twp.,										
Lemoyne,	Cumberland,										
New Market,	York, Fairview Twp.,	Riverton Cons. W. Co.,	9,000	8,925			1				
Rosemont,	Cumberland, Lower Allen Twp.,										
Shiremanstown,	Cumberland,										
South Enola,	Cumberland, E. Pennsboro Twp.,										
Washington Heights,	Cumberland, E. Pennsboro Twp.,										
West Fairview,	Cumberland,										
White Hill,	Cumberland, E. Pennsboro Twp.,										
Wormleysburg,	Cumberland,										
New Freedom,	York,	Municipal,	1,100	800				1			
New Holland,	Lancaster,	New Holland W. Co.,	1,350	1,100			1				
New Oxford,	Adams,	Municipal,	875	450				1			
Newville,	Cumberland,	Newville W. Co.,	1,500	800			1				
Oxford,	Chester,	Municipal,	2,500	2,000				1			
Palmyra,	Lebanon,	The Londonderry W. Co.,		2,300			1				
Pine Grove,	Schuylkill,	Municipal,	1,825	1,836				1			
Cherryville,	Schuylkill, Pine Grove Twp.,										
Quarryville,	Lancaster,	Quarryville W. Co.,	1,000	1,000			1				
Railroad,	York,	Private, E. Helb,	350 b	250					1		
Red Lion,	York,	Red Lion W. Co.,	3,000	3,000			1				
Rheems,	Lancaster, W. Donegal Twp.,	Rheems W. Co.,	150	125						1	
Rowenna,	Lancaster, E. Donegal Twp.,	The Rowenna W. Co.,	100	80						1	
Schaefferstown,	Lebanon, Heidelberg Twp.,	Schaefferstown W. Co.,	1,000 b	200						1	
Heidelberg Twp. (part),	Lebanon,	Heidelberg Twp. W. Co.,		1,000						1	
Shippensburg,	Cumberland,	Municipal,	3,690	5,000				1			
Shippensburg, suburbs of	Cumberland,										
Shrewsbury,	York,	Municipal,	600	300				1			
		Private, J. H. Markel,		60					1		

Spring Grove,	York,	Private, W. S. Gladfelter,	1,300	1,400					1	
Lehman,	York, Jackson Twp.,									
Steelton,	Dauphin,	Municipal,	15,337 x	15,337				1		
Stewartstown,	York,	Stewartstown W. Co.,	700 b	200 b			1			
Strasburg,	Lancaster,	Municipal,	900	1,000				1		
Tremont,	Schuylkill,	Tremont Water & Gas Co.,	2,500	700			1			
Tressler Orphan's Home, Loysville	Perry,	Private,	(300)	(300)						
West End,	Lancaster, Lancaster Twp.,	West End W. Co.,	300	300						1
West Lebanon Twp.,	Lebanon,	Municipal,	1,200	800						1
Wrightsville,	York,	Wrightsville W. S. Co. (H. E. Ahrens & others)	2,250	800			1			
York,	York,	York W. Co.,	50,543 x	57,000	1					
Manchester Twp. (part)	York,		1,600 b							—
North York,	York,		2,300				—			
Springettsbury Twp. (part)	York,		1,700 b							—
Spring Garden Twp. (part)	York,		2,500 b							—
West Manchester Twp. (part)	York,		2,500 b							—
West York,	York,		3,000 b				—			

bEstimated by Water Supply Commission
xU. S. census

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 12—Continued

Place	County	Company	Supply						Consumption (average daily)			
			Source			Method						
			Surface	Ground	Combined	Gravity	Pumped	Combined	Domestic (gals.)	Industrial (gals.)	Total (gals.)	Per capita (gals.)
Akron,	Lancaster,	Municipal,	---	1	---	---	1	---	2,400	1,600	4,000	10t
Annville,	Lebanon, South Annville Twp.,	Annville W. Co.,	---	1	---	---	---	1			30,000b	------
Arendtsville,	Adams,	Arendtsville W. Co.,	---	1	---	1	---	---			9,000b	------
Aspers,	Adams, Menallen Twp.,	Aspers W. Co.,	---	1	---	1	---	---	2,000a		2,000a	------
Atglen,	Chester,	Atglen W. Co.,	---	1	---	1	---	---	15,000a		15,000a	------
Bendersville,	Adams,	Municipal,	---	1	---	1	---	---			11,000b	------
Biglerville,	Adams,	Biglerville W. Co.,	---	1	---	1	---	---			26,000a	------
Blackwood,	Schuylkill, Reilly Twp.,	Wyoming Valley W. S. Co. (Lehigh Valley Coal Co.)	---	---	1	---	---	1	24,000	111,000	135,000	225t
Blain,	Perry,	Municipal,	---	1	---	1	---	---			6,500b	------
Blue Ball,	Lancaster, East Earl Twp.,	Private, Peter E. Shirk,	---	1	---	---	1	---	4,000		4,000	27d
Boiling Springs,	Cumberland, S. Middleton Twp.,	The Boiling Springs W. Co.,	---	1	---	---	1	---			20,000b	------
Carlisle,	Cumberland,	Carlisle Gas and Water Co.,	1	---	---	---	1	---	667,000	333,000	1,000,000	143t
Cleona,	Lebanon, N. Lebanon Twp.,	Cleona W. Co.,	---	1	---	1	---	---	4,100a		4,100a	------
Christiana,	Lancaster,	Christiana Gravity W. Co.,	---	1	---	1	---	---	105,000a	7,000	112,000a	------
Columbia,	Lancaster,	Columbia W. Co.,	1	---	---	---	1	---			726,000	60t
Dallastown,	York,	York County Cons. W. Co.,	---	---	1	---	---	1	73,800	8,200	82,000	29t
Windsor,	York,											
Yoe,	York,											
Dauphin,	Dauphin,	Dauphin Cons. W. Co.,	1	---	---	---	1		25,000a	322,000a	347,000a	------
Enola,	Cumberland, E. Pennsboro Twp.,	(Pennsylvania R. R. Co.),	---	---	1	---	1	---	42,400	10,600	53,000	33t
Delta,	York,	Municipal,	---	1	---	---	1	---			15,000	30t
Denver,	Lancaster,	Municipal,	---	1	---	1	---	---			18,000b	------
Dillsburg,	York,	Dillsburg W. Co.,	---	1	---	1	---	---			20,000a	------
Dover,	York,	Municipal,	---	1	---	---	1	---	6,700a	800a	7,500a	------
Duncannon,	Perry,	Trout Run W. Co.,	1	---	---	1	---	---			64,000b	------
Elizabethtown,	Lancaster,	Elizabethtown W. Co.,	---	---	1	---	---	1	119,000a	21,000a	140,000a	------
Emigsville,	York,	Private, E. K. Emig,	---	1	---	---	---	1			9,000a	------
Ephrata,	Lancaster,	Municipal,	---	1	---	---	---	1	100,000a	25,000a	125,000a	------
Florin,	Lancaster, East Donegal and Mt. Joy Twps.	Florin W. Co.,	---	1	---	---	1	---			30,000a	------

Fredericksburg,	Lebanon, Bethel Twp.,	Fredericksburg W. Co.,	---	1	---	---	1	---	10,000	----------	10,000	32t
Glen Rock,	York,	Municipal,	1	---	---	1	---	---	16,000a	24,000a	40,000a	------
		Private, Jos. Dice,	---	1	---	---	1	---	----------	----------	1,200b	------
Hellam,	York,	Hellam W. Co.,	---	1	---	1	---	---	----------	----------	4,000a	------
Hellam Township (part)	York,											
Hanover,	York,	Hanover & McSherrystown W. Co., (David Gring & others)	---	---	1	---	.	1	668,000a	626,000	1,294,000a	------
Conewago Twp. (part),	Adams,											
McSherrystown,	Adams,											
Penn Twp. (part),	York,											
Harrisburg,	Dauphin,	Municipal,	1	---	---	---	1	---	3,900,000	3,900,000	7,800,000	110t
Heights,	Lebanon,	Heights W. Co.,	1	---	---	---	1	---	*	----------	----------	------
Hershey,	Dauphin, Derry Twp.,	Hershey W. Co.,	---	---	1	---	1	---	210,000	140,000	350,000	350t
Derry Church,	Dauphin, Derry Twp.,											
Highspire,	Dauphin,	Highspire W. Co. (Paxtang Cons. W. Co.) (David Gring and others)	---	1	---	1	---	---	80,000a	----------	80,000a	------
Hummelstown,	Dauphin,											
Paxtang,	Dauphin,											
Penbrook,	Dauphin,											
Pa. State Lunatic Hos.	Dauphin, Susquehanna Twp.,	Paxtang Cons. W. Co. (David Gring and others)	1	---	---	---	1	---	650,000a	430,000a	1,080,000a	------
Pleasant View,	Dauphin, Susquehanna Twp.,											
Progress,	Dauphin, Susquehanna Twp.,											
Rutherford Heights,	Dauphin, Swatara Twp.,											
Lancaster,	Lancaster,	Municipal,	1	---	---	---	1	---	5,425,000	1,825,000	7,250,000	121t
Lancaster, suburb of,	Lancaster, Manheim Twp.,	Manheim Twp. W. Co.,	1	---	---	1	---	---	†2,500a	----------	2,500a	------
Lebanon,	Lebanon,	Municipal,	1	---	---	---	---	1	1,570,000a	280,000a	1,850,000a	------
Lebanon, independent,	Lebanon,											
Annville Twp. (part),	Lebanon,											
Avon,	Lebanon, S. Lebanon Twp.,											
East Lebanon,	Lebanon, N. Lebanon Twp.,											
Hebron,	Lebanon, S. Lebanon Twp.,											
Jonestown,	Lebanon,	Lebanon Valley Cons. W. Co. (David Gring and others)	1	---	---	---	1	---	700,000	875,000	1,575,000	125t
N. Annville Twp. (part)	Lebanon,											
N. Londonderry Twp. (part)	Lebanon,											
Palmyra,	Lebanon,											
S. Annville Twp. (part)	Lebanon,											
Lititz,	Lancaster,	Municipal,	---	1	---	---	1	---	75,000	75,000	150,000	54t
Manheim,	Lancaster,	Manheim W. Co.,	---	1	---	---	1	---	94,000	31,000	125,000	52t
Marietta,	Lancaster,	Marietta Gravity W. Co.,	---	---	1	---	---	1	64,000a	21,000a	85,000a	------
E. Donegal Twp. (part)	Lancaster,											
Marysville,	Perry,	Marysville W. Co.,	1	---	---	1	---	---	100,000a	300,000a	400,000a	------
Mechanicsburg,	Cumberland,	Mechanicsburg Gas & Water Co.,	---	---	1	---	---	1	500,000	----------	500,000	125d
Middletown,	Dauphin,	Middletown & Swatara Con. W. Co. (Paxtang Cons. W. Co.) (David Gring and others)	1	---	---	---	---	1	360,000	240,000	600,000	150t
Royalton,	Dauphin,											
Mt. Gretna,	Lebanon,	Private, Mt. Gretna W. Co. (unincorporated)	---	1	---	---	1	---	----------	----------	43,000	34t
Mt. Holly Springs,	Cumberland,	Mt. Holly W. Co.,	1	---	---	1	---	---	67,500	7,500	75,000	75t
Mt. Joy,	Lancaster,	Municipal,	1	---	---	---	1	---	250,000	250,000	500,000	217t

Place	County	Company	Supply						Consumption (average daily)			
			Source			Method						
			Surface	Ground	Combined	Gravity	Pumped	Combined	Domestic (gals.)	Industrial (gals.)	Total (gals.)	Per capita (gals.)
Mountville,	Lancaster,	Municipal,	---	1	---	---	---	1	8,200	2,700	10,900	18t
New Bloomfield,	Perry,	Bloomfield Water & Sewer Co.,	---	1	---	1	---	---	19,000a	6,000a	25,000a	------
New Cumberland,	Cumberland,											
Bella Vista,	York, Fairview Twp.,											
Camp Hill,	Cumberland,											
Dale Estate,	Cumberland, E. Pennsboro Twp.,											
Elkwood,	Cumberland, Lower Allen Twp.,											
Hillside,	Cumberland, Lower Allen Twp.,											
Lemoyne,	Cumberland,											
New Market,	York, Fairview Twp.,	Riverton Cons. W. Co.,	1	---	---	---	---	1	----------	----------	210,000	24t
Rosemont,	Cumberland, Lower Allen Twp.,											
Shiremanstown,	Cumberland,											
South Enola,	Cumberland, E. Pennsboro Twp.,											
Washington Heights,	Cumberland, E. Pennsboro Twp.,											
West Fairview,	Cumberland,											
White Hill,	Cumberland, E. Pennsboro Twp.,											
Wormleysburg,	Cumberland,											
New Freedom,	York,	Municipal,	---	1	---	---	1	---	20,000a	5,000a	25,000a	------
New Holland,	Lancaster,	New Holland W. Co.,	---	1	---	1	---	---	36,000	15,000	45,000	41t
New Oxford,	Adams,	Municipal,	1	---	---	---	1	---	15,000a	15,000a	30,000a	------
Newville,	Cumberland,	Newville W. Co.,	---	1	---	---	1	---	36,000a	4,000a	40,000a	------
Oxford,	Chester,	Municipal,	---	1	---	---	1	---	49,000	11,000	60,000	30t
Palmyra,	Lebanon,	The Londonderry W. Co.,	---	1	---	---	---	1	94,000a	16,000a	110,000a	------
Pine Grove,	Schuylkill,	Municipal,	1	---	---	1	---	---	133,000a	60,000a	193,000a	------
Cherryville,	Schuylkill, Pine Grove Twp.,											
Quarryville,	Lancaster,	Quarryville W. Co.,	---	---	1	---	---	1	27,000	3,000	30,000	30t
Railroad,	York,	Private, E. Helb,	---	1	---	1	---	---	1,000a	10,000a	11,000a	------
Red Lion,	York,	Red Lion W. Co.,	---	1	---	---	---	1	80,000	20,000	100,000	33t
Rheems,	Lancaster, W. Donegal Twp.,	Rheems W. Co.,	---	1	---	---	1	---	4,500	500	5,000	40t
Rowenna,	Lancaster, E. Donegal Twp.,	The Rowenna W. Co.,	---	1	---	---	1	---	400a	----------	400a	------
Schaefferstown,	Lebanon, Heidelberg Twp.,	Schaefferstown W. Co.,	---	1	---	1	---	---	----------	----------	8,000b	------
Heidelberg Twp. (part),	Lebanon,	Heidelberg Twp. W. Co.,	---	1	---	1	---	---	----------	----------	40,000b	------

Shippensburg,	Cumberland,	Municipal,	1	---	---	1	---	---	382,000a	68,000a	450,000a	------
Shippensburg, suburbs of	Cumberland,											
Shrewsbury,	York,	Municipal,	---	1	---	---	1	---	------	------	2,500a	------
		Private, J. H. Markel,	---	1	---	---	1	---	------	------	2,000b	------
Spring Grove,	York,	Private, W. S. Gladfelter,	1	---	---	1	---	---	45,000a	5,000a	50,000a	------
Lehman,	York, Jackson Twp.,											
Steelton,	Dauphin,	Municipal,	1	---	---	---	1	---	------	------	1,200,000	78t
Stewartstown,	York,	Stewartstown W. Co.,	---	1	---	---	1	---	------	------	6,000b	------
Strasburg,	Lancaster,	Municipal,	---	1	---	1	---	---	------	------	60,000a	------
Tremont,	Schuylkill,	Tremont Water & Gas Co.,	1	---	---	---	---	1	------	------	28,000b	------
Tressler Orphans' Home, Loysville	Perry,	Private,	---	---	---	---	---	---	15,000b	------	15,000b	------
West End,	Lancaster, Lancaster Twp.,	West End W. Co.,										
West Lebanon Twp.,	Lebanon,	Municipal,	1	---	---	1	---	---	13,800	†	13,800	46d
Wrightsville,	York,	Wrightsville W. S. Co. (H. E. Ahrens & others)	---	1	---	---	1	---	------	------	32,000b	------
			---	---	1	---	---	1	10,000	15,000	25,000	31t
York,	York,	York W. Co.,	1	---	---	---	1	---	2,110,000	1,590,000	3,700,000	65t
Manchester Twp. (part)												
North York,	York,											
Springettsbury Twp. (part)	York,											
Spring Garden Twp. (part)	York,											
West Manchester Twp. (part)	York,											
West York,	York,											

aEstimated by water companies
bEstimated by Water Supply Commission
dDomestic
tTotal
*Supplied by Lebanon Valley Cons. Water Co.
†Pur. from Lancaster

RAILROAD WATER SUPPLIES, SECTION NO. 12

PHILADELPHIA & READING

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Harrisburg Division				
Lebanon Sub-Division				
Annville,	Spring, Annville W. Co.,	Gravity,		
Hershey,	Hershey Improv. Co.,			
Hummelstown,	Hummelstown Cons. W. Co.			52,600
Harrisburg (Engs.),	City of Harrisburg,			110,100
Harrisburg (Misc.),	City of Harrisburg,			17,600
Lebanon (Engs.),	Quittapahilla Creek,	Pumped,	100,000	
Lebanon (Station),	City of Lebanon,			2,200
West Lebanon (Engs.),	L. V. Cons. W. Co.,			184,000
Palmyra (Engs.),	Gravel Hill Con. W. Co.,			38,500
Palmyra Station,	Londonderry W. Co.,			
Rutherford (Engs.),	Rutherford Hts. W. S. Co.			268,000
	Beaver Creek W. Co.,			511,000
Rutherford (Misc.),	Rutherford Hts. W. S. Co.			12,000
Middletown,	Paxtang Cons. W. Co.,			1,000
Boiling Springs Sub-Division				
Bendersville,	Aspers W. Co.,			
Hunters Run,	Hunters Run,	Pumped,		
Carlisle Jct.,	Well,			
Boiling Springs,	Yellow Breeches Creek,	Pumped,		
Brandtsville (Engs.),	Yellow Breeches Creek,	Pumped,	125,000	
Carlisle (Engs.),	Carlisle Gas & W. Co.,			
Carlisle Station,	Carlisle Gas & W. Co.,			
Center Mills,	Possum Creek,	Pumped,		
Hays Grove (Engs.),	Yellow Breeches Creek,	Pumped,	42,400	
Lurgan (Engs.),	Boro. of Shippensburg,			99,300
Lochiel (Engs.),	City of Harrisburg,			9,500
Moors Mills (Engs),	Yellow Breeches Creek,	Pumped,	125,000	
Red Tank (Engs.),	Spring,	Gravity,	10,000	
Riverton (Engs),	Riverton Cons. W. Co.,			78,000
Shippensburg Sta.,	Western Maryland R. R.,			
Shippensburg, engines and freight house	Boro. of Shippensburg,			
Steelton,	Boro. of Steelton,			200
White Hill,	Riverton Cons. W. Co.,			
Reading Division				
Dauphin,	Stream,	Gravity,	6,000	
Good Spring,	Stream,	Gravity,	47,000	
Gold Mine,	Stream,	Gravity,	25,000	
Lincoln,	Spring,	Gravity,	1,000	
Lorberry Jct.,	Stream,	Gravity,	40,000	
Pine Grove,	Creek,	Gravity,	30,000	
Richardson Jct.,	Creek,	Gravity,	25,000	
Tremont,	Spring,	Gravity,	20,000	
Yellow Spring,	Brook,	Gravity,	10,000	
Trout Run,	Stream,	Gravity,	10,000	
Wilmington & Columbia Division				
Columbia,	Borough of Columbia,			3,000
Coppenheffer,	Spring,	Gravity,	5,000	
Lancaster,	City of Lancaster,			5,000
Lancaster Jct.,	Well,	Pumped,	10,000	
Manheim,	Big Chickies Cr.,	Pumped,	6,000	
Millway,	Cocalico Cr.,	Pumped,	5,000	
Reinholds,	Creek,	Pumped,	10,000	
Vinemont,	Springs,	Gravity,	8,000	
Joanna,	Joanna Dam,	Pumped,	50,000	

PENNSYLVANIA

Baltimore Division				
Cly,	Susquehanna Riv.,	Pumped,	345,000	
Ewing,	Stream,	Gravity,	5,000	
East York,	York W. Co.,			26,200
Gladfelter,	Stream,	Gravity,	10,000	
Glen Rock,	Stream,	Gravity,	18,000	
Hanover Jct.,	Codorus Cr.,	Pumped,	259,200	

RAILROAD WATER SUPPLIES, SECTION NO. 12—Continued

PENNSYLVANIA

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Loucks,	Little Codorus Cr.,	Pumped,	155,000	
Lemoyne,	Stream,	Gravity,	25,000	
Spring Grove,	P. H. Gladfelter Co.,			20,000
Shrewsbury,	Stream,	Gravity,	4,000	
York,	York W. Co.,			142,600
Maryland & Central Division				
Oxford,	Wells,	Pumped,	75,000	
Middle Division				
Cove,	Susquehanna River,	Pumped,	160,000	
	Spring,	Gravity,		
Phila. Division				
Atglen (2 track pans),	A. & S. Br. Octoraro W. Co.		225,000	
Atglen (4 track pans),	Octoraro W. Co.,		561,500	
Dillerville (2 track pans),	Artesian well,	Pumped,	350,000	
	Stream,	Pumped,		
Elizabethtown,	Boro. W. Co.,			46,000
Branch Int.,	Swatara Con. W. Co.,			130,000
Harrisburg,	Dauphin Con. W. Co.,			320,000
Harrisburg,	Harrisburg City,			124,000
Lancaster,	Lancaster City,			279,000
Leaman Place,	Kreiders Run,	Pumped,	75,000	
Columbia,	Susquehanna Riv.,	Pumped,	125,000	
Cresswell,	Susquehanna Riv.,	Pumped,	208,000	
Enola Yard,	Susquehanna Riv.,	Pumped,	2,000,000	
Marysville,	Marysville W. Co.,			400,000
Mars Hill,	Octoraro W. Co.,			
"Q" Tower,	Octoraro W. Co.,		125,000	
"SF" Tower,	Octoraro W. Co.,		325,000	
Williamsport Division				
Rockville,	Dauphin Con. W. Co.,			2,500

CUMBERLAND VALLEY

Dillsburg,	Dillsburg W. Co.,			2,300
Carlisle,	Carlisle Gas & W. Co.,			40,000
Newville,	Newville W. Co.,			15,200
Richmond,	Spring,	Gravity,	14,000	
Shippensburg,	Boro. of Shippensburg,			1,900
White Hill,	Riverton Cons. W. Co.,			88,200
Harrisburg,	City,			3,500

CORNWALL

Donaghmore,	Lebanon City W. S. Co.,			5,000
Miners Village,	Spring,	Gravity,	5,000	
Penryn Park,	Spring,	Gravity,	5,000	
(West Lebanon Shops),	Spring,	Gravity,	12,500	
	Lebanon Val. W. S. Co.,			

BROWNSTONE & MIDDLETOWN.

Waltonville,	Spring,	Gravity,		
Brownstone,	Hummelstown Con. W. Co.,			

NEWPORT & SHERMANS VALLEY

New Germantown,	Springs,	Gravity,	3,000	

RAILROAD WATER SUPPLIES, SECTION NO. 12—Continued

LANCASTER, OXFORD & SOUTHERN

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Dorseys,	Spring,	Gravity,	4,000	
Quarryville,	Quarryville W. Co.,			2,000
Spruce Grove,	Spring,	Gravity,	5,000	
White Rock,	Spring,	Gravity,	4,000	

MARYLAND & PENNSYLVANIA

York,	York W. Co.,			15,000
Felton,	Spring,	Gravity,	3,500	
Spout Falls,	Spring,	Gravity,	3,000	
Totals,			5,826,100	3,055,400

INDUSTRIAL WATER SUPPLIES, SECTION NO. 12 (MISCELLANEOUS COMPANIES)

(Does not Include all the Smaller Companies)

Place	Company	Source	Method	Industrial consumption (gallons per day)	Daily amount of product	Returned to stream (%)	Increase in temp. °F
Carlisle, Cumberland County,	Standard Chain Co.,	Carlisle W. & P. Co.,		(300)	3 tons	75	30
Harrisburg, Dauphin County,	Central Iron & Steel Co.,	Susquehanna River,	Pumped,	1,967,000	281 tons		
Steelton, Dauphin County,	Pennsylvania Steel Co.,	Susquehanna River,	Pumped,	40,000,000	13,000 tons	100	
Cornwall, Lebanon County,	Cornwall Ore Bank Co.,	Furnace Creek,	Pumped,	s&c20,000	80 tons	20	
	Robesonia Iron Co.,	Sadlers Run,	Gravity,	s10,000	330 tons	0	
Lebanon, Lebanon County,	Pennsylvania Steel Co.,	Lebanon W. Co.,		*500,000			
	Lebanon Valley I. & S. Co.	Spring,	Pumped,	1,770,000	225 tons	65	
		Lebanon Val. Con. W. Co.,		(94,000)			
	Lackawanna I. & S. Co.,	Quittapahilla Creek,	Pumped,	s&c1,000,000	250 tons iron 400 tons coke		
		West Lebanon Twp. municipal works	Gravity,	(26,000)			
Duncannon, Perry County,	Duncannon Iron Works,	Trout Run W. Co.,					
		Sherman Cr.,					
Pine Grove, Schuylkill County,	Gensemer & Salem Tannery, No. 1.	2 artesian wells,	Pumped,	72,000	500 hides	100	
		Swatara Cr.,		180,000			
		Buffalo Cr.,		90,000			
		Municipal system,		s(50,000)			
	Gensemer & Salem Tannery, No. 2.	Artesian well,	Pumped,	200,000	200 hides	100	
		Municipal system,	Emergencies,				
Spring Grove, York County,	P. H. Gladfelter Co. paper and pulp mills.	Codorus Cr.,	Pumped,	3,000,000	35 tons	90	
York, York County,	York Stone & Supply Co.,	Quarry,	Pumped,	s5,000	300 perch	100	0
	Sandusky Portland Cement Co.	York Water Co.,		s(30,000)	400 bbls.		
	Central Roofing Mfg. Co.,	Codorus Cr.,	Pumped,	1,000,000	45 tons	100	0
	Schmidt & Ault Paper Co.,	Codorus Cr.,	Pumped,	864,000	33 tons	75	0
		Tyler Run,					
		York Water Co.,		s(50,000)			
	Standard Chain Co.,	York Water Co.,		s&c(26,100)	18 tons	75	30

INDUSTRIAL WATER SUPPLIES, SECTION NO. 12 (MISCELLANEOUS COMPANIES)

(Does not Include all the Smaller Companies)

Place	Company	Source	Method	Industrial consumption (gallons per day)	Daily amount of product	Returned to stream (%)	Increase in temp. °F
York Haven, York County,	York Haven Paper Co.,	Susquehanna River,	Pumped,	s250,000			
				4,000,000			
		Drilled well,	Pumped,	50,000			
Total from private systems,				54,978,000			

sWater for steam purposes.
cWater for cooling or condensing purposes.
*See more complete description under Lebanon independent borough.

INDUSTRIAL WATER SUPPLIES, SECTION NO. 12 (COAL MINING COMPANIES)

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
Schuylkill County—							
Tremont Twp.,	Philadelphia & Reading Coal & Iron Co.:						
	Lincoln Colliery,	Rausch Cr.,	Pumped,	3,000b	125,000	1,962	1
		Drilled wells,	Pumped,	(150 pop.)	150,000		
Hegins Twp.,	Good Spring Colliery,	Rausch Cr.,	1,250,000 gal. reservoir gravity	3,000b (150 pop.)	222,000	1,270	1
Total from private systems				6,000	497,000		

AKRON BOROUGH, LANCASTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 719; increase since 1900, 66. Estimated 1915, 750

LOCATION

Northern central Lancaster County, on Cocalico Creek, near its junction with Conestoga Creek; on Philadelphia & Reading Ry., Wilmington and Columbia Division.

INDUSTRIES

Tobacco growing; eight cigar factories, cigar box factory and shoe factory.

WATER SUPPLY

Municipal water works.

SOURCE AND COLLECTION

(1) Three 8-inch drilled wells, 111 to 157 feet deep, on hillside 600 feet southeast of borough and 8,000 feet from creek. Water raised by deep well pumps over each well, belt-connected to 20 hp. gasoline engine; discharge to 63,500 gallon receiving basin; thence pumped through 6-inch force main by 250,000 gallon triplex pump operated by same engine.

(2) Dug well, 16 feet diameter, 74 feet deep, adjacent to pumping station; storage capacity 72,000 gallons. Water pumped through 4-inch main to discharge from well pumps and to receiving basin by Meyers Bulldozer pump belt-connected to a 3 hp. Westinghouse motor.

(3) Spring 250 feet from, and 30 feet lower than, pumping station. Water pumped by electrically operated pump with 3-inch discharge to receiving well at pumping station.

DISTRIBUTION

By pumping direct to system through 6-inch force main with 8-inch connection to 85,000 gallon equalizing standpipe in southeastern part of borough. Distributing mains 2.8 miles 4-inch to 8-inch; 27 fire hydrants, 6-inch; pressures 45 to 75 pounds.

CONSUMPTION

About 400 persons supplied; 53 taps. Average daily consumption, 4,000 gallons, measured by 62 meters, 7 industrial.

COST AND REVENUE

Total cost of works, $22,500.

ANNVILLE (SOUTH ANNVILLE TWP.), LEBANON COUNTY

ANNVILLE WATER COMPANY

Estimated population, 2,500

LOCATION

Southwestern Lebanon County, on Quittapahilla Creek; on Philadelphia & Reading Ry., 5 miles west of Lebanon.

INDUSTRIES

Seat of Lebanon Valley College. Stocking factory, knitting mill and shoe factory.

WATER SUPPLY

Annville Water Co., incorporated 1889 and supplying since 1892.

SOURCE AND COLLECTION

Springs in bottom of 250,000 gallon reservoir, 0.75 mile north of village. A 75,000 gallon reservoir 0.75 mile west of the other fed by three springs. During droughts drilled well near larger reservoir reinforces supply by pumping.

DISTRIBUTION

Gravity pipe line from each reservoir to village; pressure 30 to 60 pounds.

CONSUMPTION

Supply to 1,000 people; 183 connections. Lebanon Valley College uses about 10,000 gallons daily. Total consumption about 30,000 gallons daily.

ARENDTSVILLE BOROUGH, ADAMS COUNTY

THE ARENDTSVILLE WATER COMPANY

Population 1910 census, 383; decrease since 1900, 10. Estimated 1915, 460a

LOCATION

Northwestern Adams County on Conewago Creek; 2.5 miles west of Philadelphia & Reading Ry.; nearest station, Biglerville.

INDUSTRIES

Farming community in fruit growing district; barrel factory and creamery.

WATER SUPPLY

The Arendtsville Water Co., incorporated 1910 for Arendtsville Borough.

SOURCE AND COLLECTION

A spring run tributary to Conewago Creek, and three springs; intake 2.5 miles northeast of center of borough, with 4-inch tile pipe line, 15 feet long, to small receiving basin; 3-inch wooden pipe line, 750 feet long, to catch basin for three springs. Springs connected to basin by 3-inch tile pipe. A 4-inch wooden gravity main from this basin to distributing system of borough. Water backs up through 6-inch pipe to 360,000 gallon distributing reservoir on hillside 0.5 mile south of borough.

DISTRIBUTION

By gravity through about 1.5 miles distributing mains, 6-inch and 4-inch, the latter 40% of total; 4-inch laterals; head 180 to 250 feet; pressures 75 to 90 pounds; 15 fire hydrants.

CONSUMPTION

About 308 persons supplied; 70 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 9,000 gallons.

ASPERS (MENALLEN TWP.), ADAMS COUNTY

ASPERS WATER COMPANY

Estimated population, 200a

LOCATION

Northern Adams County, on Opossum Creek, tributary of Conewago Creek. Name of post office for Bendersville Station, on Philadelphia & Reading Ry., 1 mile east of Bendersville Borough.

INDUSTRIES

Tile factory and crushed quartz mill.

WATER SUPPLY

Aspers Water Co., incorporated 1913 for part of Menallen Township within 1 mile radius of Aspers Village.

SOURCE AND COLLECTION

Three springs in ravine 1.5 miles northwest of village; two, at elevation 849, piped 1,000 feet to 160,000 gallon distributing reservoir, elevation 751; other, at elevation 760, piped 120 feet to reservoir; pipe 2½-inch.

DISTRIBUTION

By gravity, with head of 143 feet, through 6-inch main 1.1 miles, reducing to 4-inch for 0.6 mile; 8 fire hydrants, 2½-inch.

CONSUMPTION

Two hundred persons supplied; 27 taps. Stated average daily consumption 2,000 gallons, all domestic: maximum 3,000 gallons. No means of measurement.

ATGLEN BOROUGH, CHESTER COUNTY

ATGLEN WATER COMPANY

Population 1910 census, 546; increase since 1900, 142. Estimated 1915, 600a

LOCATION

Extreme western Chester County, near headwaters of East Branch of Octoraro Creek, along Philadelphia Division of Pennsylvania R. R.; connected with Lancaster and Coatesville by Conestoga Traction Co. Range of elevation 25 feet.

INDUSTRIES

Hardware manufacturing plant, Atglen Paper Co. and several small industries.

WATER SUPPLY

Atglen Water Co., incorporated 1904 for Atglen Borough.

SOURCE AND COLLECTION

Springs 1.5 miles northeast of borough collected in 48,000 gallon reservoir. Reservoir about 75 feet above borough, and spring 5 to 22 feet. Watershed area about 0.5 square mile. Springs yield 90,000 gallons daily. Water soft.

DISTRIBUTION

By gravity through about 1 mile 8-inch and 4-inch mains; pressure about 40 pounds; 14 fire hydrants.

CONSUMPTION

About 500 persons supplied through 160 taps. Stated average daily consumption 15,000 gallons, all domestic. No means of measurement.

BENDERSVILLE BOROUGH, ADAMS COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 355; increase since 1900, 13. Estimated 1915, 365a

LOCATION

Northern Adams County, on Opossum Creek, tributary of Conewago Creek; along the Philadelphia & Reading Ry.

INDUSTRIES

Farming community; barrel manufacturing and evaporating plant.

WATER SUPPLY

Municipal works built in 1900.

SOURCE AND COLLECTION

Water from spring 1.5 miles southwest of borough collected in 60,000 gallon reservoir. Supply from other springs nearby can be piped into reservoir at small cost. Water soft.

DISTRIBUTION

By gravity through 2.6 miles 4-inch and 3-inch mains, 50% each; pressure 150 to 160 pounds; 16 fire hydrants.

CONSUMPTION

Entire population supplied through 90 taps. No means of measuring consumption; assuming 30 gallons per capita, would be about 11,000 gallons per day.

BIGLERVILLE BOROUGH, ADAMS COUNTY

BIGLERVILLE WATER COMPANY

Population 1910 census, 386; incorporated in 1902. Estimated 1915, 610a

LOCATION

Northern central Adams County, on small tributary of Conewago Creek; on Philadelphia & Reading Ry.

INDUSTRIES

Farming community; creamery, canning factory, evaporating factory, barrel factory, cigar factory and planing mill.

WATER SUPPLY

Biglerville Water Co., incorporated 1908 for Biglerville Borough.

SOURCE AND COLLECTION

Water from springs rising on Yellow Hill, 1.5 miles northwest of borough, collected into 200,000 gallon reservoir.

DISTRIBUTION

By gravity; mains as follows:

Size (inches),	6	4	3	Total
Length (miles),	1.4	0.6	1.6	3.6

Pressure about 65 pounds; 20 fire hydrants, 2½-inch.

CONSUMPTION

About 350 persons supplied; 112 taps, with three meters. Stated average daily consumption, 20,000 gallons; maximum 30,000 gallons. No means of measurement.

BLACKWOOD (REILLY TWP.), SCHUYLKILL COUNTY

WYOMING VALLEY WATER SUPPLY COMPANY
(Lehigh Valley Coal Company)

Estimated 1915 population, 600a

LOCATION

Southwestern Schuylkill County, near headwaters of Swatara Creek, at mouth of Panther Creek; on Reading Division of Philadelphia & Reading Ry., and Pottsville Branch of Lehigh Valley R. R.

INDUSTRIES

Mines of Lehigh Valley Coal Co.

WATER SUPPLY

Blackwood Department of Wyoming Water Supply Co., subsidiary of Lehigh Valley Coal Co. (Complete description of this company

under Hazleton City, Section No. 5.) Leased in 1910 Blackwood Water Co., incorporated 1904 for Reilly Township.

SOURCE AND COLLECTION

(1) Black Creek, tributary of Swatara Creek: 1,625,000 gallon storage reservoir about 1 mile south of village, at elevation 844; watershed area 2.4 square miles. Water pumped through 4-inch, reducing to 3-inch, force main over Sharp Mountain (the ridge between Panther and Black creeks, summit elevation 1,427.5), 583 feet head, to 176,000 gallon distributing reservoir, at elevation 1,050.9, near boiler house southwest of village, and 2-inch branch to spring reservoir of source (3). Pumping equipment a 144,000 gallon Blake duplex pump driven by air furnished from Blackwood colliery.

Terra cotta pipe, 18-inch from storage reservoir about 1,800 feet to southern mouth of tunnel through mountain at elevation 835.9, to carry water through tunnel by gravity and make pumping unnecessary except in emergency. Water soft.

(2) Panther Creek, tributary of Swatara Creek: 1,350,000 gallon storage reservoir 800 feet northeast of village, overflow passing to a 160,000 gallon reservoir on same stream about 0.5 mile below and 1,600 feet northwest of village. Watershed area of upper reservoir 33 acres, and of lower 440 acres. Water pumped from lower reservoir through 6-inch force main 1,900 feet south to distributing reservoir at boiler house, and 4-inch branch main 2,100 feet southeast to 23,000 gallon distributing reservoir just south of village, at elevation 1,041.4. Pumping equipment 864,000 gallon Jeanesville duplex pump furnished with steam from colliery. Pumping plant owned by Lehigh Valley Coal Co. Water soft.

(3) Spring in southern part of village collected in 17,000 gallon reservoir at elevation 990.2, receives a 2-inch branch line from 3-inch main of (1). Water soft.

DISTRIBUTION

From (1) by gravity to boiler house.

From (2) by gravity through 4-inch pipe to village.

From (3) by gravity through 2-inch pipe to 4-inch of (2).

Distributing mains, 0.8 mile, 2-inch and 4-inch; 7 fire hydrants, 2½-inch; pressures 5 to 35 pounds.

CONSUMPTION

Supply to 600 people; 29 taps. Average daily consumption 135,000 gallons; 18% estimated domestic and 82% industrial, measured by pump displacement. Meters to be installed soon on supply lines.

BLAIN BOROUGH, PERRY COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 326. Same as 1900

LOCATION

Southwestern Perry County, on small tributary of Shermans Creek; on Newport & Shermans Valley R. R.

INDUSTRIES

Farming community; cutting of extract wood, grist mill and planing mill.

WATER SUPPLY

Municipal plant installed about 1860 and owned by the borough since 1900.

SOURCE AND COLLECTION

Large spring 0.25 mile northwest of borough; 4,000 gallon basin around spring.

DISTRIBUTION

By gravity through 3½-inch pipe, reducing to 3-inch and 2-inch. Iron standpipe, 30 feet high, in southeastern part of borough. Pressure about 10 pounds.

CONSUMPTION

Entire population supplied by 5 taps and 10 public hydrants. No means of measuring consumption; assuming 20 gallons per capita, would be 6,500 gallons daily.

BLUE BALL (EAST EARL TWP.), LANCASTER COUNTY

PRIVATE SUPPLY

Estimated population, 400a

LOCATION

Northeastern Lancaster County, near headwaters of Shirks Run, tributory of Conestoga Creek; connected with Lancaster by the Conestoga Traction Co.

INDUSTRIES

Agricultural community; machine shop, three tobacco warehouses, cigar factory, shirt factory.

WATER SUPPLY

Private supply owned by Peter E. Shirk, installed in 1908.

SOURCE AND COLLECTION

Eight-inch drilled well, 250 feet deep, on hill in village; 4-inch force pump made by Mr. Shirk, operated by 2 hp. electric motor, lifts water to 10,000 gallon tank, 61 feet above lowest point of village. Water medium hard.

DISTRIBUTION

By gravity through 0.8 mile of 4-inch pipe and 0.2 mile of 2-inch; 17 fire hydrants, 1½-inch.

CONSUMPTION

Thirty-eight houses (150 persons), supplied; 38 taps. Average daily consumption, determined by gauging the tank, about 4,000 gallons, all domestic. No meters.

BOILING SPRINGS VILLAGE (SOUTH MIDDLETON TWP.), CUMBERLAND COUNTY

THE BOILING SPRINGS WATER COMPANY

Estimated population 1913, 800

LOCATION

Southeastern Cumberland County, on Yellow Breeches Creek; on Philadelphia & Reading Ry., Philadelphia, Harrisburg & Pittsburgh Branch; connected with Harrisburg and Carlisle by trolley. Village takes its name from Boiling Springs, the largest springs in the State, with a flow of from 20,000,000 to 30,000,000 gallons per day. Farming district.

WATER SUPPLY

Boiling Spring Water Co., incorporated 1913 for South Middleton Township, Cumberland County; used over a year as private supply, under approval by Commissioner of Health issued in 1910.

SOURCE AND COLLECTION

Water pumped from artesian well to 115,000 gallon distributing reservoir by 100,000 gallon pump, and distributed by gravity.

CONSUMPTION

Entire population supplied. Consumption not known; assuming 25 gallons per capita, would be 20,000 gallons daily.

CARLISLE BOROUGH, CUMBERLAND COUNTY

CARLISLE GAS & WATER COMPANY

Population 1910 census, 10,303; increase since 1900, 677. Estimated 1915, 11,000a

LOCATION

County seat central Cumberland County, on Conodoguinet Creek; on Cumberland Valley and Philadelphia & Reading railroads, and connected with Harrisburg by trolley.

INDUSTRIES

Seat of Government Indian School and Dickinson College. Axle spoke factory; frog, switch and manufacturing company, manganese steel foundry.

WATER SUPPLY

Carlisle Gas & Water Co., incorporated 1853 for Carlisle Borough, part of stock being owned by borough.

SOURCE AND COLLECTION

Water pumped from intake on Conodoguinet Creek, 1.5 miles north of borough, to filter plant and two distributing reservoirs. Pumping equipment 2,000,000 gallon pump operated by two 53-inch water turbines, under head of 8 feet, with 75 hp. electric motor in reserve; auxiliary 2,000,000 gallon steam pump and one 100 hp. boiler. Each pump has 16-inch intake; one discharges into 16-inch main, the other into 10-inch main to filter plant on hill 0.3 mile west of pumping station.

FILTER PLANT

Four Jewell filters, total capacity 2,000,000 gallons daily. Water flows from filters through 1 mile of 16-inch and 8-inch mains into two distributing reservoirs, combined capacity 3,500,000 gallons.

DISTRIBUTION

By gravity; mains as follows:

Size (inches),	8	6	4	2	Total
Length (miles),	2.0	9.9	9.2	0.5	21.6
Per cent.,	9	4.6	43	2	100

Pressures 30 to 34 pounds; 146 fire hydrants, 15 4-inch and 131 2½-inch.

CONSUMPTION

About 7,000 persons served; 2,600 taps, 660 metered. Average daily consumption, by pump displacement, 1,000,000 gallons, maximum 1,200,000 gallons, about one-third industrial; metered consumption 200,000 gallons daily, 40,000 gallons industrial.

CHRISTIANA BOROUGH, LANCASTER COUNTY

CHRISTIANA GRAVITY WATER COMPANY

Population 1910 census, 934; increase since 1900, 166. Estimated 1915 population, 1,100

LOCATION

Eastern boundary Lancaster County, on Buck Run, tributary of east branch of Octoraro Creek; along Pennsylvania R. R., Philadelphia Division, and connected with Lancaster and Coatesville by Conestoga traction line. Ground slopes gently to south with fall of 20 feet.

INDUSTRIES

Machine company, lumber and planing mill, grain elevators and feed mills.

WATER SUPPLY

Christiana Gravity Water Co., incorporated 1894 for Christiana Borough.

SOURCE AND COLLECTION

Water collected from 10 springs at source of Octoraro Creek, 2 miles northwest of borough. Springs walled in, cemented water-tight and kept under lock and key; minimum daily flow reported about 130,000 gallons. Water from springs flows through 1,500 feet of 4-inch and 6-inch iron and terra cotta pipes to 6-inch iron main leading to distributing chamber; thence to either or both of two covered stone reservoirs, combined capacity 160,000 gallons, or direct to borough through 8-inch main. Reservoirs 30 feet lower than springs and 150 feet above highest part of borough.

DISTRIBUTION

By gravity from spring-fed reservoirs through 1.75 miles of 8-inch main to borough, thence through 3 miles of 4-inch and 6-inch distributing mains; head about 185 feet; pressures 70 to 80 pounds; 22 fire hydrants, 6-inch.

CONSUMPTION

About 820 people supplied; 198 domestic and 4 industrial taps. Average daily consumption 112,000 gallons, 105,000 domestic; 7,000 industrial, metered; seven taps metered, 4 industrial.

CLEONA (NORTH LEBANON TWP.), LEBANON COUNTY

CLEONA WATER COMPANY

Estimated population 1915, 500a

LOCATION

West central Lebanon County, in valley of Quittapahilla Creek; on Lebanon Valley Branch of Philadelphia & Reading Ry., and connected with Lebanon by trolley.

INDUSTRIES

Sausage factory and implement factory.

WATER SUPPLY

Cleona Water Co., incorporated 1909 for North Lebanon Township. Works installed before incorporation in 1890.

SOURCE AND COLLECTION

Spring 0.25 mile north of village impounded in 16,000 gallon stone-lined covered reservoir. Four other springs available in dry weather.

DISTRIBUTION

By gravity through 6-inch line, 0.25 mile long, with 0.2 mile of 4-inch laterals; pressure too low for fire protection.

CONSUMPTION

About 500 people supplied; 68 taps; 105 outside domestic service hydrants, ¾-inch. Stated consumption 4,000 gallons per day, all domestic.

COLUMBIA BOROUGH, LANCASTER COUNTY

COLUMBIA WATER COMPANY

Population 1910 census, 11,454; decrease since 1900, 862. Estimated 1915, 10,960

LOCATION

Northwestern Lancaster County, along east bank of Susquehanna River on Pennsylvania R. R., Conestoga traction line and Philadelphia & Reading R. R. Elevations 246 to 381 feet above sea level.

INDUSTRIES

Iron works, rolling mills, stone works, silk mills, tanneries, brewery, flour mills, a number of smaller industries, and car repair shop and roundhouse of the Pennsylvania R. R. Co.

WATER SUPPLY

Columbia Water Co., incorporated 1823 for Columbia Borough. The larger industries have separate and private supplies.

SOURCE AND COLLECTION

Sixteen-inch intake pipes in Susquehanna River, opposite upper end of borough, to collecting well at pump station. Raw water pumped to 300,000 gallon settling tanks; thence flows through filters into 50,000 gallon clear water basin and is pumped directly into distributing mains, surplus flowing into 4,500,000 gallon covered reser-

voir in natural basin between two hills 0.75 mile northeast of borough. Pumping installation one 2,500,000 gallon Morris compound steam driven centrifugal raw water pump, one 2,500,000 gallon Tacony simple steam driven centrifugal raw water pump, one 2,250,000 gallon Worthington triple expansion low duty pump, one 2,500,000 gallon Snow cross-compound crank and flywheel high duty pump, one 140 hp. Sterling water tube boiler, one 110 hp. Babcock & Wilcox water tube; either boiler can be used with either engine.

DISTRIBUTION

By pumping from clear water basin. Distributing mains as follows:

Size (inches),	12	10	8	6	4	Total
Length (miles),	2.5	0.9	1.9	11.3	2.8	19.4
Per cent.,	18		10	58	14	100

Pressures 20 to 85 pounds; 93 fire hydrants, 65 6-inch and 28 4-inch owned by borough.

CONSUMPTION

About 12,000 persons served; 2,600 taps. Average daily consumption, measured by pump displacement, 726,000 gallons; 77 taps of large consumers metered; none domestic; metered consumption, 82,300 gallons daily.

DALLASTOWN, YOE AND WINDSOR BOROUGHS, YORK COUNTY

YORK COUNTY CONSOLIDATED WATER COMPANY
(United Water and Guarantee Company)

	Population 1910 census	Increase since 1900	Estimated 1915
Dallastown,	1,884	703	3,500a
Yoe,	567	42	
Windsor,	697	(Inc. 1905)	
Total,	3,148		

LOCATION

Within 2 miles of each other in south central York County, on divide between Muddy and Codorus creeks; on Western Maryland R. R. and on York Rys. about 8 miles southeast of York.

INDUSTRIES

Cigar box factory; several cigar factories.

WATER SUPPLY

York County Consolidated Water Co. (controlled by United Water and Guarantee Co.), incorporated 1909 as merger of the following companies:

Name	Inc.	Incorporated for
Dallastown Water Co.,	1896	Dallastown Borough
Phoenix Water Co.,	1909	Windsor Borough
Yoe Water Co.,	1899	Yoe Borough

Works of Dallastown Water Co. were supplied from springs developed in 1898; they supply present system. Yoe Water Co. works were supplied by pumping from springs developed in 1899; now discontinued.

SOURCE AND COLLECTION

(1) Water from springs rising 0.5 mile east of Dallastown, in valley of Mill Creek, tributary of Codorus Creek, collected by gravity into twin collecting basins, total capacity 74,000 gallons, 100 feet from Mill Creek; 140,000 gallon Worthington and 430,000 gallon Gardner pumps force water through 4-inch main 3,000 feet to distributing system.

(2) Auxiliary supply from dam on Mill Creek, near above described basins and pumping station; watershed area less than 2 square miles. Low lift centrifugal pump with 3-inch suction lifts water to 22,500 gallon settling tank; thence it flows through 140,000 gallon filter unit, with 4-inch effluent, to spring water collecting basins. A 300,000 gallon triplex pump is to be used to pump raw water from creek into settling tank when necessary to use creek water. Pumps operated by 15 hp. Otto gasoline engine and 80 hp. boiler.

DISTRIBUTION

By pumping from collecting basins; two equalizing reservoirs, 400,000 gallons and 60,000 gallons, on hill between Yoe and Dallastown. Distributing mains as follows:

Size (inches),	8	6	4	3	2	Total
Length (miles),	0.1	2.3	3.4	0.7	0.1	6.6

Pressures 20 to 120 pounds; 38 fire hydrants, 4-inch.

CONSUMPTION

About 2,800 persons supplied; 587 taps, 19 metered. Average daily consumption, measured by pump displacement, 82,000 gallons, maximum 92,000 gallons, 90% domestic.

DAUPHIN BOROUGH, DAUPHIN COUNTY

DAUPHIN CONSOLIDATED WATER SUPPLY CO.

Population 1910 census, 545; decrease since 1900, 21. Estimated 1915, 3,000a

LOCATION

Western Dauphin County, on east bank of Susquehanna River at mouth of Stony Creek; on Northern Central Division of Pennsylvania R. R. and Philadelphia & Reading Ry.

INDUSTRIES

Dauphin iron works.

WATER SUPPLY

Dauphin Consolidated Water Supply Co., incorporated 1903 as a merger of following companies, incorporated 1901: Citizens Water Company of Dauphin Borough, Citizens Water Company of Susquehanna Township, Citizens Water Company of Middle Paxton Township. Owns property and franchises of Enola Water Co. of Cumberland County and Progress Water Supply Co. of Dauphin County. The Dauphin Consolidated Water Supply Co. is controlled by the Pennsylvania R. R.

SOURCE AND COLLECTION

Intake on Stony Creek, 600 feet above Northern Central R. R. Water pumped to 150,000 gallon reservoir on hill above borough, or directly into mains as required; watershed area 37.7 square miles. Pumping station located at mouth of creek, equipment as follows:

1,000,000 gallon triplex pump operated by 45 hp. Leffel turbine water wheel, 500,000 gallon triplex pump operated by 30 hp. Leffel turbine water wheel, 5,000,000 gallon Deane compound condensing pump, 2,500,000 gallon Worthington duplex pump, two 100 hp. locomotive boilers. Portable boiler and engine, air surge tank and air compressor.

Supply mains 0.4 mile, principally 8-inch. Water soft.

DISTRIBUTION

By gravity and direct pumping. Distributing mains as follows:

Size (inches),	8	6	4	Total
Length (miles),	0.1	0.4	0.5	1.0

Thirty-one fire hydrants.

CONSUMPTION

Supply to 2,200 people in Dauphin; 336 taps, 65 metered and to locomotives and shops of Pennsylvania R. R. at Lucknow and Harrisburg. Stated average daily consumption 347,000 gallons, 25,000 domestic and 322,000 industrial. No means of measurement.

DELTA BOROUGH, YORK COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 881; increase since 1900, 197. Estimated 1915, 980b

LOCATION

Extreme southeastern York County, 1 mile from Mason and Dixon Line and 4 miles west of Susquehanna River; on Western Maryland R. R.

INDUSTRIES

Principally quarrying of slate; planing mill, foundry and machine shop.

WATER SUPPLY

Municipal works built in 1897.

SOURCE AND COLLECTION

Six-inch drilled well 180 feet into ridge back of borough. A 36,000 gallon electrically driven pump forces water to 50,000 gallon wooden tank.

DISTRIBUTION

By gravity through 6-inch main.

CONSUMPTION

Supply to 500 people; 115 taps. Average daily consumption 15,000 gallons, measured by meter on each service.

DENVER BOROUGH, LANCASTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 933; incorporated 1900. Estimated 1915, 950b

LOCATION

Northeastern Lancaster County, on headwaters of Cocalico Creek, tributary of Conestoga Creek; on Philadelphia and Reading Ry.

INDUSTRIES

Shoe and cigar factories, silk mills, machine shop and creamery.

WATER SUPPLY

Municipal works installed 1900.

SOURCE AND COLLECTION

Three springs forming source of small tributary of Cocalico Creek, 1 to 2 miles north of borough. Four-inch gravity line to 250,000 gallon reservoir just outside of borough.

DISTRIBUTION

By gravity through 8-inch line; pressures 30 to 60 pounds.

CONSUMPTION

Supply to about 600 persons; 130 taps. Consumption not known; assuming 30 gallons per capita, would be 18,000 gallons daily.

DILLSBURG BOROUGH, YORK COUNTY

DILLSBURG WATER COMPANY

Population 1910 census, 853; increase since 1900, 121. Estimated 1915, 900a

LOCATION

Northwestern York County, near headwaters of Dogwood Run and Fishers Run, tributaries of Yellow Breeches Creek, at foot of South Mountain. Connected with Mechanicsburg by Dillsburg Branch of Cumberland Valley R. R., using electric line. Range in elevation 40 feet.

INDUSTRIES

Farming community; harness factory, spoke works, shirt factory, brick plant and two grain elevators.

WATER SUPPLY

Dillsburg Water Co., incorporated 1901 for Dillsburg Borough.

SOURCE AND COLLECTION

Springs rising on South Mountain, 2 miles west of borough. Reported minimum daily flow about 50,000 gallons. Company owns other springs which may be connected. Water soft.

DISTRIBUTION

By gravity from springs through about 3 miles of 8-inch, reducing to 6-inch main; a 300,000 gallon concrete storage reservoir on mountainside below springs connected to 8-inch main receives surplus water. Considerable portion of surplus water allowed to escape through pipe line into small run in borough. Pressures 65 to 105 pounds; 25 fire hydrants, 2½-inch.

CONSUMPTION

About 75% of population served; 165 taps. Remainder use private shallow wells. Average daily consumption 20,000 gallons. No means of measurement.

DOVER BOROUGH, YORK COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 576; increase since 1900, 138. Estimated 1915, 625a

LOCATION

Central York County, near headwaters of Fox Run, tributary of Little Conewago Creek; on York Rys. (electric).

INDUSTRIES

Agriculture, hosiery factory and cigar factory.

WATER SUPPLY

Municipal works installed in 1905.

SOURCE AND COLLECTION

An 8-inch drilled well, 310 feet deep, on highest land in borough. Water pumped to 65,000 gallon cypress tank elevated on iron tower, pump operated by 5 hp. motor. Water soft.

DISTRIBUTION

By gravity through 8-inch main. Distributing main 2 miles 4-inch to 8-inch; pressures 45 to 60 pounds; 23 fire hydrants, 11 4-inch and 12, 8-inch.

CONSUMPTION

Supply to 400 persons; 56 taps. Stated average daily consumption, 7,500 gallons, 10% industrial. No means of measurement. Three taps metered, two industrial.

DUNCANNON BOROUGH, PERRY COUNTY

TROUT RUN WATER COMPANY

Population 1910 census, 1,474; decrease since 1900, 187. Estimated 1915, 1,500b

LOCATION

Eastern Perry County, on west bank of Susquehanna River, just below mouth of Juniata River; on main line of Pennsylvania R. R., and terminus of Susquehanna River & Western R. R.

INDUSTRIES

Iron works, novelty works and shirt factory.

WATER SUPPLY

Trout Run Water Co., incorporated 1894.

SOURCE AND COLLECTION

Two mountain streams, tributaries of Sherman Creek; intake on one 4 miles southwest of borough, and on other 1.5 miles southwest. A 550,000 gallon reservoir, 0.25 east of second dam, receives surplus water. Combined watershed area 1,500 acres practically all owned by company.

DISTRIBUTION

By gravity through 6-inch main from first intake, joining with 8-inch main from second intake, 1 mile from borough; pressure about 60 pounds.

CONSUMPTION

Supply to 1,600 people; 415 taps. Supplies Duncannon iron works with water for boilers and Pennsylvania R. R. for fire protection. Consumption not known; assuming 40 gallons per capita, would be 64,000 gallons daily.

INDUSTRIAL

The Duncannon iron works obtain most of their supply through 6-inch intake from Sherman Creek. Water for boilers supplied by water company.

ELIZABETHTOWN BOROUGH, LANCASTER COUNTY

ELIZABETHTOWN WATER COMPANY (THE)

Population 1910 census, 2,587; increase since 1900, 1,114. Estimated 1915, 3,000a

LOCATION

Extreme northwestern Lancaster County, at headwaters of Conoy Creek, tributary to Susquehanna River; on the Middle Division of Pennsylvania R. R. and connected with Lancaster by the Conestoga traction line.

INDUSTRIES

Shoe, implement, shirt and cigar factories.

WATER SUPPLY

The Elizabethtown Water Co., incorporated 1895 for Elizabethtown Borough.

SOURCE AND COLLECTION

Small tributary of Upper Conoy Creek, just northwest of borough, with five springs and one flowing artesian well. Intake from creek leads to one of the springs, which are connected to collecting basin. Well water flows into collecting basin by gravity, or can be pumped by two pumps operated by 17 hp. gasoline engines, pumping directly into mains. Water medium hard.

DISTRIBUTION

By gravity to borough, surplus flowing to 700,000 gallon reservoir 0.5 mile west of borough. Distributing and supply mains as follows:

Size (inches),	8	6	4	Total
Length (miles),	1.5	1.3	3.3	6.1

Pressures 60 to 80 pounds; 38 fire hydrants, 2½-inch.

CONSUMPTION

About 2,000 persons supplied; 425 taps, 325 metered. Stated average daily consumption 140,000 gallons; maximum 200,000 gallons, 15% industrial. Metered consumption 82,000 gallons daily domestic and 16,000 industrial. Pennsylvania R. R. supplied with water for locomotive use; most of industries supplied.

GENERAL

Masonic Home nearby has private system from three springs, water being collected and pumped to reservoir and distributed by gravity.

EMIGSVILLE VILLAGE, YORK COUNTY

PRIVATE SUPPLY

Estimated population, 500a

LOCATION

Northern central York County, on small tributary of Codorus Creek; on Northern Central Division of Pennsylvania R. R., connected with York by York Rys. (electric).

INDUSTRIES

Acme wagon works.

WATER SUPPLY

Private system owned by E. K. Emig.

SOURCE AND COLLECTION

Six springs on Emig Farm, 1.5 miles from village, piped through 4½-inch pipe to small intake basin, from which 1.5 miles of 3-inch gravity main connects to 13,000 gallon distributing reservoir in village; watershed area about 4 acres. Dug well and pumping station at wagon works, with 2-inch force main to distributing reservoir, held for emergencies.

DISTRIBUTION

By gravity through 0.5 mile distributing mains; pressures, 30 to 40 pounds; one fire hydrant, 3-inch.

CONSUMPTION

About 200 persons supplied; 50 taps. Stated daily consumption 9,000 gallons, 50% domestic and 50% industrial. No means of measurement.

ENOLA VILLAGE (EAST PENNSBORO TWP.), CUMBERLAND COUNTY

DAUPHIN CONSOLIDATED WATER SUPPLY CO.

Estimated 1915 population, 1,600a

LOCATION

Extreme northeastern Cumberland County, on west bank of Susquehanna River; on Pennsylvania R. R. Range in elevation 368 to 451 feet above sea level.

INDUSTRIES

Residents mainly employes in Enola yard of the Pennsylvania R. R.

WATER SUPPLY

Dauphin Consolidated Water Supply Co., incorporated 1903 as a merger of three companies in Dauphin County which supply Dauphin Borough. This company purchased property and franchises of Enola Water Co. in 1906, whose plant was installed 1905. Company controlled by Pennsylvania R. R., which has a separate industrial supply to the yards.

SOURCE AND COLLECTION

(1) Supply from three drilled wells in a hollow just north of village and about 0.25 mile from Susquehanna river, pumped by air lift. Well No. 1, 5⅝-inch diameter, 100 feet deep; well No. 2, 6-inch diameter, 150 feet deep; well No. 3, 5⅝-inch diameter, 200 feet deep.

Water pumped from wells by air lift to 33,000 gallon sedimentation basin, flowing by gravity through 210,000 gallon mechanical filter plant to 1,000 gallon clear water basin, thence pumped to 147,000 gallon standpipe on hill above river, at elevation 474.

Pumping station equipment 125,000 gallon Snow duplex steam pump, 35 hp. locomotive boiler, Ingersoll straight line air compressor.

(2) Susquehanna River; water obtained from Pennsylvania R. R. tanks, delivered by gravity to filter plant. About 75% of supply from Susquehanna River and 25% from well. Water soft.

DISTRIBUTION

By gravity; pressure 15 to 75 pounds; supply mains 0.3 mile 4-inch and 0.3 mile 6-inch pipe; distributing mains 2.2 miles 4-inch and 1.0 mile 6-inch pipe; 17 fire hydrants.

CONSUMPTION

Entire population supplied; 326 taps. Average metered daily consumption, 53,000 gallons, 80% domestic and 20% industrial; 320 of 326 taps metered.

EPHRATA BOROUGH, LANCASTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 3,192; increase since 1900, 741. Estimated 1915, 3,560b

LOCATION

Northeastern corner of Lancaster County, along Cocalico Creek, tributary of Conestoga Creek; on Philadelphia & Reading Ry., and connected with Reading and Lancaster by electric railway. Borough comprises 737 acres, at base and on side of Ephrata Mountain; elevation 325 to 577.

INDUSTRIES

Extensive tobacco growing district; two cigar factories, silk mill, two shirt factories and cigar box factory. Water from Crystal Spring, 2 miles east of borough, issues from hard sandstone formation and is bottled and shipped.

WATER SUPPLY

Municipal works purchased 1906 from the Ephrata Water Co., incorporated 1878.

SOURCE AND COLLECTION

(1) Springs feeding two reservoirs in extreme southeastern part of borough as follows: Spring No. 1 on mountainside 400 feet southeast of reservoir No. 1; 2-inch pipe to reservoir No. 1; fails during summer. Spring No. 2 300-foot tunnel into hillside 5,000 feet southeast of reservoir No. 1, 3-inch pipe to reservoir No. 1. Spring No. 3 on mountainside; 300-foot tunnel into hillside 200 feet southeast of reservoir No. 2; 4-inch pipe to reservoir No. 2.

Reservoir No. 1 in extreme southeast part of borough, capacity 133,000 gallons; reservoir No. 2, 200 feet east of reservoir No. 1; capacity 430,000 gallons; both at elevation 577. Six-inch gravity main

from reservoir No. 1 westerly 2,100 feet to distributing system; 6-inch gravity main from reservoir No. 2 westerly 2,100 feet to distributing system, where 6-inch line, 600 feet long, connects with 6-inch gravity main from reservoir No. 1.

(2) Springs feeding reservoir No. 3, auxiliary supply by pumping from drilled wells. Reservoir No. 3 1,000 feet east of eastern borough line, at elevation 457; capacity 160,000 gallons. First half of year Levi Mohler Spring and spring No. 4 are used, but from August to December these are insufficient, and supply is augmented by four drilled wells and Sam Mohler Spring.

Spring No. 4, tunnel 300 feet into hillside 400 feet east of reservoir No. 2 at elevation 574; 4-inch gravity pipe northeast 500 feet to point 50 feet north of reservoir No. 2, connecting with 6-inch gravity main from reservoir No. 2 and 1½-inch connection 600 feet north to 4-inch gravity pipe from Levi Mohler Spring.

Levi Mohler Spring on hillside 1 mile east of borough, at elevation 514; tile drain 150 feet to concrete box, elevation 494, with 4-inch gravity pipe 5,200 feet to reservoir No. 3; pipe receives 1½-inch connection from No. 4 spring.

Sam Mohler Spring on hillside, 1,700 feet southeast of pumping station, at elevation 477; 4-inch gravity pipe to receiving basin at pumps, elevation 437.

Most of water from spring No. 4 diverted by gate to reservoir No. 3. Can be delivered by gravity to either reservoir No. 2 or No. 3.

Pumping station 1 mile east of borough. Equipment one 288,000 gallon Fairbanks-Morse steam pump and one Fairbanks-Morse air compressor belt-connected to Erie City 60 hp. steam engine with 60 hp. Pennsylvania tubular boiler.

Wells as follows: No. 1, 235 feet east of pump, 139 feet deep; 4-inch terra-cotta pipe connection to receiving basin. No. 2, 296 feet southeast of pump, 91 feet deep; 4-inch pipe to basin. No. 3, 308 feet southwest of pump, 102 feet deep; water pumped by 2-inch air line to 4-inch line from well No. 2. No. 4, 350 feet southwest of pump, 125 feet deep; water pumped by 2-inch air line to 4-inch line from well No. 2. All wells, 8-inch diameter, at elevations 459 to 470.

From reservoir No. 3, 6-inch gravity main leads 1,800 feet northeasterly to distributing system at northwestern corner of borough. Washington Avenue, along base of mountain, divides borough into two districts.

DISTRIBUTION

(1) High service district supplied by reservoirs No. 1 and No. 2; 8,200 feet of 4-inch pipe and 2,400 feet of 6-inch; average pressure 90 pounds.

(2) Low service district supplied by reservoir No. 3; 8,500 feet of 6-inch pipe, 11,000 feet of 4-inch and 500 feet of 2-inch; average pressure 45 pounds. Valves at each cross-street along Washington Avenue, kept closed except in case of fire emergencies.

CONSUMPTION

Supply to 2,500 people; 100 connections on high service and 400 on low service. Average daily consumption 125,000 gallons, 25,000 industrial. Private wells used by 300 persons; cisterns by 400.

FLORIN VILLAGE (EAST DONEGAL AND MT. JOY TWPS.), LANCASTER COUNTY

FLORIN WATER COMPANY

Estimated population 1915, 1,000

LOCATION

Western Lancaster County, on boundary line between Mt. Joy and East Donegal townships; on Philadelphia Division of Pennsylvania R. R.

INDUSTRIES

Farming community; tobacco warehouses, shirt factory, concrete block plant, milk shipping depot.

WATER SUPPLY

Florin Water Co., a merger in 1914 of the Florin Water Co., incorporated 1911 for Mt. Joy Township, and the East Donegal Township Water Co., incorporated 1912 for East Donegal Township; latter two companies sold at sheriff's sale and bought in about a year ago by Eli Nissley, of Florin.

SOURCE AND COLLECTION

Two drilled wells on hill 3,000 feet north of center of village; water pumped to adjacent 160,000 gallon distributing reservoir. Pumping equipment, 105,000 gallon Downie deep well pump driven by gasoline engine, 6-inch discharge, and 55,000 gallon windmill, 3-inch discharge. Total pumping capacity 230,000 gallons per day. Pumps work 5 or 6 hours every other day. Water medium hard.

DISTRIBUTION

By gravity; pressures 30 to 43 pounds. Distributing mains 2.5 miles, half 4-inch and balance 6 and 8-inch; 4 private fire hydrants, 3 owned by Mr. Nissley.

CONSUMPTION

About 500 persons supplied; 100 taps. Stated average daily consumption, as measured by fall in reservoir, 30,000 gallons. No meters.

FREDERICKSBURG (BETHEL TWP.), LEBANON COUNTY

FREDERICKSBURG WATER COMPANY

Estimated population 1915, 590a

LOCATION

Northeastern Lebanon County, on Elizabeth Run, tributary of Little Swatara Creek.

INDUSTRIES

Agricultural community; two shirt factories, coach and carriage works, cigar factories and creameries.

WATER SUPPLY

Fredericksburg Water Co., incorporated 1886 for Fredericksburg Village.

SOURCE AND COLLECTION

By pumping from dug well 0.25 mile east of village; well 20 feet diameter and 20 feet deep with 6-inch drilled hole extending 50 feet below bottom, in shale formation. A 288,000 gallon Snow duplex steam pump operated by 18 hp. boiler lifts water to 110,000 gallon reservoir. Pumps operated three times a week for 5 to 6 hours, exhausting supply each time.

DISTRIBUTION

By gravity through 0.5 mile of 8-inch main, with 0.5 mile of 4-inch and 2-inch laterals; pressures 30 to 34 pounds; no fire hydrants.

CONSUMPTION

Supply to 316 persons; 79 taps. Average daily consumption, measured by fall of water in reservoir, 10,000 gallons, all domestic. No meters.

GLEN ROCK BOROUGH, YORK COUNTY

MUNICIPAL WATER WORKS
PRIVATE SUPPLY

Population 1910 census, 1,263; increase since 1900, 146. Estimated 1915, 1,400a

LOCATION

Southern York County, near headwater of South Branch of Codorus Creek; on Pennsylvania R. R. Central Division.

INDUSTRIES

Iron foundry, cotton mill, screen factory, two furniture factories, planing mill, flooring mill, sewing factory and bakery.

WATER SUPPLY

Municipal works built in 1901. Small private system owned by Joseph Dice, installed in 1890.

MUNICIPAL WATER WORKS

SOURCE AND COLLECTION

Storage and distributing reservoir, capacity 1,000,000 gallons, on small spring run tributary to South Branch of Codorus Creek; several springs 3 miles east of borough. Water soft.

DISTRIBUTION

By gravity through 3 miles of 8-inch pipe; pressure 100 to 110 pounds; 40 fire hydrants.

CONSUMPTION

About 700 persons supplied; 150 taps; rest use shallow wells, except those supplied by small private system. Stated average daily consumption 40,000 gallons, 40% domestic and 60% industrial. No means of measuring. Twenty-four taps metered, 15% industrial.

COST AND REVENUE

Total cost of works, $28,000; annual operating expenses, $1,000; gross revenue, $1,950.

PRIVATE SYSTEM OF JOSEPH DICE

SOURCE AND COLLECTION

Two drilled wells in northern part of borough pumped by wind power, with electric motor auxiliary, to 18,000 gallon reservoir. Water soft.

DISTRIBUTION

By gravity; pressures, 25 to 35 pounds.

CONSUMPTION

About 40 persons in northern part of borough supplied. No means of determining consumption; assuming 30 gallons per capita would be 1,200 gallons daily.

HELLAM BOROUGH, YORK COUNTY

HELLAM WATER COMPANY

Population of Hellam Borough 1910 census, 472. Estimated 1915, 600

LOCATION

Eastern York County, on north side of valley of Kreutz Creek, connected with York and Wrightsville by Northern Central Division of Pennsylvania R. R. and York Ry. (electric). Range in elevation 80 feet.

INDUSTRIES

Two cigar factories and ice cream manufacturing plant.

WATER SUPPLY

Hellam Water Co., incorporated 1906 for Hellam Township.

SOURCE AND COLLECTION

Three springs, 1.33 miles north of borough, near headwaters of small tributary of Kreutz Creek, elevation about 500. Water through 4-inch pipes to small receiving chamber and thence to borough. Excess flows from receiving chamber into 350,000 gallon storage reservoir, 184 feet above main street of borough, used only in emergency. Several springs nearby may be connected to system if necessary. Water soft.

DISTRIBUTION

By gravity through 1.4 miles of 8-inch main to distributing system, consisting of 0.9 mile 6-inch and 0.4 mile 4-inch mains; pressures 75 to 90 pounds; 9 fire hydrants, 6-inch.

CONSUMPTION

About 450 persons supplied; 90 taps. Stated average daily consumption 4,000 gallons; 80% domestic. No means of measurement

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HANOVER AND McSHERRYSTOWN BOROUGHS AND ADJACENT TERRITORY, YORK AND ADAMS COUNTIES

HANOVER AND McSHERRYSTOWN WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915	Supplied
York County:				
Hanover Borough,	7,057	1,755	9,000a	8,500a
Penn Township,	3,021	1,146		1,500a
Adams County:				
McSherrystown,	1,724	234	2,000a	2,000a
Conewago Twp.,	1,542	351		500a
Total,	13,344			12,500a

LOCATION

Hanover, southwestern York County, and McSherrystown in southeastern Adams County, at headwaters of Plum Creek, tributary of South Branch Conewago Creek. Hanover, on Western Maryland and Northern Central Division of Pennsylvania R. R., connected with York by York Ry., and with McSherrystown by Hanover & McSherrystown Street Ry. Range of elevation does not exceed 50 feet.

INDUSTRIES

Shoe, furniture and cabinet, glove, cigar box, cigar, inner sole, wire cloth and plow handle factories; planing and silk mills; brick works, canning company, extract company, novelty company, water wheel works, creamery, cordage company and shops of Western Maryland R. R.

WATER SUPPLY

Supply from Hanover and McSherrystown Water Co., a reorganization, with change of name, from the Consumers Water Co.; latter company, incorporated 1895 for Hanover borough, had purchased the following companies:

Name	Inc.	Date of purchase	Incorporated for
Hanover Water Co.,	1872	1896	Hanover Borough
McSherrystown Water Co.,	1893	1905	McSherrystown Borough

Rights to operate in the remaining territory are obtained through the following charters:

Name	Inc.	Incorporated for
Penn Township Water Co.,	1910	Penn Twp., York Co.
Conewago Township Water Co.,	1910	Conewago Twp., Adams Co.

SOURCE AND COLLECTION

(1) Gitt Springs. Water collected in three "Pigeon Hill" reservoirs of 16,000,000 gallons combined capacity, in small ravine in mountainside 3 miles north of Hanover. Watershed area 0.5 square mile, 130 acres owned by company. Flow of springs stated to be 200,000 to 500,000 gallons per day. Water soft. Capacity of No. 1 reservoir, 11,000,000 gallons; No. 2, and No. 3, 2,500,000 gallons each. Elevations 221 to 275 feet.

(2) Codorus Creek, Furnace Run and Slonaker Creek, joining 3 miles southeast of Hanover, form West Branch of Codorus Creek; intakes on each stream just above their junction. Water passes through crushed stone strainers into 16-inch terra cotta pipes to 260,000 gallon sedimentation basin, thence pumped through two 6-inch mains, pressure 86 pounds, to Parr Hill reservoir, capacity 8,000,000 gallons, 1.5 miles southeast of Hanover, 224 feet above highest point in borough.

Watershed area: Slonaker Creek, 1.5 square miles and Furnace Creek 5 square miles. Water medium hard.

Pumping station equipment 1,000,000 gallon Smith-Vaile double acting triplex pump connected to 14-foot Fitz water wheel; reserve power from Atlas steam engine, also direct connected; 1,250,000 gallon Worthington duplex compound piston pump; 75 hp. return tubular boiler.

(3) Conewago Creek; auxiliary supply by pumping from 1,000,000 gallon storage reservoir formed by small dam on Conewago Creek, 4 miles south of Hanover, in Adams County. Water passes through crushed stone intake into 24-inch terra cotta supply line to 1,000,000 gallon concrete sedimentation basin, 800 feet below dam; drawn off into concrete well and pumped through 12-inch force main against working pressure of 125 pounds to Parr Hill reservoir, 4.3 miles northeast of pumping station; this source furnishes main supply for 6 months of year. Watershed area 32 square miles. Water medium hard. In addition two 200 g. p. m. drilled wells, 500 feet deep, operated by Harris air lifts, air developed by Platt Iron Works duplex air compressor. Water treated with hypochlorite and discharged into sedimentation basin. Pumping equipment 1,500,000 gallon Laidlaw-Dunn Gordon Corliss flywheel compound condensing pump, 200 hp. Franklin water tube boiler.

DISTRIBUTION

By gravity (a) from Pigeon Hill reservoirs through two mains 3 miles long, one an 8-inch, reducing to 6-inch, and the other a 10-inch; and (b) from Parr Hill reservoir through 2 miles of 10-inch main. In McSherrystown a 105,000 gallon standpipe as equalizer and for additional storage.

Supply mains—Conewago Creek to Parr Hill reservoir 4.3 miles of 12-inch; Codorus Creek to Parr Hill reservoir, 3 miles of 6-inch.

Distributing mains—Hanover, 20 miles, 10, 8, 6, and 4-inch; McSherrystown, 3.0 miles, 6 and 4-inch; Conewago Twp., 0.5 mile, 4-inch; Penn Township, 2.6 miles, 6, 4 and 2-inch; total 26.1 miles.

Pressures in systems—Hanover, 70 to 80 pounds; McSherrystown, 40 to 46 pounds; Penn Township, 80 pounds; Conewago Township, 80 pounds.

Fire hydrants—Hanover, 10 6-inch and 85 4-inch; McSherrystown, 26 4-inch; Penn Township, 13 2½-inch; total, 134.

CONSUMPTION

Supply divided between the boroughs and suburbs as follows:

Place	Pop. supplied	Taps.	Meters	Average daily consumption (gallons)‡	Indus. per cent.	Cons. (gallons)
Hanover,	8,500	2,044	86*	1,250,000	40	500,000x
McSherrystown,	2,000	186	6*	60,000	10	6,000x
Conewago Township,	500	83	2	20,000	----------	----------
Penn Township,	1,500	371	10*	214,000	56	120,000x
Totals,	12,500a	2,684	104	1,294,000	----------	626,000x

*Only industrial consumers metered.
‡Measured by metering industrial and estimating the domestic.
xEntirely metered.

HARRISBURG CITY, DAUPHIN COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 64,186; increase since 1900, 14,019. Estimated 1915, 70,754x

LOCATION

The capital of the State. Western Dauphin County, along east bank of Susquehanna River; on Pennsylvania, Northern Central, Cumberland Valley and Philadelphia & Reading railroads. Center of interurban electric railway lines. Comprises area of 8.7 square miles, one-third built up, 3.27 square miles water surface. Principal part of city level; large residential district on hill back from river; elevations 310 to 600 feet.

INDUSTRIES

Steel and tin plate mills, foundry, machine shops, pipe mills, railroad repair shops, typewriter factory, silk factory, cigar factories, shoe factories, and minor industries.

WATER SUPPLY

Municipal works built 1843 by Harrisburg Water Co., incorporated 1833 and purchased by city in 1847. Rebuilt in 1874 and 1905.

SOURCE AND COLLECTION

Susquehanna River; water filtered and pumped to distributing reservoir. A 42-inch intake pipe, 250 feet to filter plant on Hargest Island, opposite center of city; intake at elevation 284.4 or five feet below low water. Centrifugal pumps lift water from suction well through 200 feet of 30-inch pipe to 4,000,000 gallon sedimentation basin; water flows by gravity through 200,000 gallon coagulation basin built in two parts, and 12,000,000 gallon mechanical filter, 12 units, to 625,000 gallon clear water basin, elevation 296.5; pumps can deliver direct to coagulation basin by 24-inch connection. Plant protected from floods by earth dike with concrete facing, top elevation 320, or four feet above high water. From clear water basin 42-inch pipe, laid in trench on rock bottom of river bed, 1,980 feet to 350,000 gallon pump well of low service pumping station on east bank of river, at foot of North Street. Thence pumped through single 16-inch force main into 30-inch force main 9,875 feet to 20,000,000 gallon low service reservoir in Reservoir Park, on hillside near eastern limits of city, elevation 497. Low service pumping station has two 30-inch

emergency intakes extending 700 feet to center of east channel of river into that part of stream usually carrying West Branch water.

High service district supplied by pumping station at Reservoir Park, where two pumps, with 16-inch suction from 30-inch gravity line from low service reservoir, discharge through 12-inch line to high service distributing system with 1,000,000 gallon covered high service distributing reservoir, at elevation 608, on hilltop in park, 2,000 feet east of low service reservoir. Pumps operated about eight hours twice each week.

PUMPING EQUIPMENT

Station	Number and type	Date of Mfg.	Rated capacity each
Filter plant	Two Worthington centrifugal pumps,	1905	16,000,000 gallons daily
	Two Fleming engines,	1905	115 hp.
	Two Harrisburg horizontal tubular boilers,	1905	150 hp.
Low service	Two Harrisburg Foundry and Machine Co. pumps	1874	6,000,000 gallons daily
	One Barr vertical triplex pump,	1902	12,000,000 gallons daily
	Two Harrisburg horizontal tubular boilers,	1901	125 hp.
	Two Harrisburg horizontal tubular boilers,	1905	125 hp.
High service	Two Hague triplex pumps,	1911	1,000,000 gallons daily
	One electric motor,	1911	50 hp.
	One Nash gas engine,	1911	30 hp.

Pumping equipment entirely in duplicate.

DISTRIBUTION

By gravity; two services, high and low, separated by closed gates. High service district comprises residential area in eastern part, elevation from 430 to 520; supplied by 12-inch branch from 12-inch force main, connecting pumps and high service reservoir. Elevation of low service district 310 to 430; supplied by gravity through two 30-inch mains from low service reservoir.

DISTRIBUTING MAINS

Size (inches),	4	6	8	10	12	16	20	Total
Length (miles),	3.2	63.4	9.2	4.5	5.9	1.8	2.6	90.6
Per cent.,	4	70	10	5	(	11	)	100

PRESSURES

District	Average	Minimum	Maximum
Low service,	55	29	74
High service,	70	52	85
Whole city,	56	29	85

Fire hydrants, 1,056 public and 61 private.

CONSUMPTION

Entire population supplied; 18,000 taps; 12,000 meters, metering 14,800 taps. Average daily consumption 7,800,000 gallons, 50% industrial; total determined by pump displacement, industrial entirely metered.

COST AND REVENUE

Total cost of plant, $1,800,000; total receipts (1913), $204,000; total expenses, operation and maintenance (1913), $88,000.

HERSHEY AND DERRY CHURCH, DAUPHIN COUNTY

HERSHEY WATER COMPANY

Estimated 1915 population: Hershey, 900; Derry Church, 300

LOCATION

Adjoining villages in southeastern Dauphin County, on Spring Creek, a tributary of Swatara Creek; on Lebanon Valley Branch of Philadelphia & Reading Ry., 13 miles east of Harrisburg, and connected with that place and Lebanon by electric railway. Range of elevation, Hershey 60 feet, Derry Church 30 feet.

INDUSTRIES

Hershey chocolate factory.

WATER SUPPLY

Hershey Water Co., incorporated 1913 for portion of Derry Township, but supplying water since 1895 under Hershey Improvement Co.

SOURCE AND COLLECTION

(1) Intake dam, capacity 3,500,000 gallons, on Manada Creek, tributary of Swatara Creek, nearly a mile above mouth and 4 miles northwest of Hershey; watershed area 29 square miles. Twelve-inch gravity main 2,000 feet to pump well at filter plant; two low service 500,000 gallon centrifugal pumps raise water to 160,000 gallon basin, whence it flows through two 500,000 gallon filter units to 50,000 gallon clear water basin; pumped by two 500,000 gallon electrically

operated triplex pumps through 10-inch force main 5,400 feet to two 500,000 gallon distributing reservoir on hilltop 1 mile northwest of and 190 feet above Hershey.

(2) Derry Church Spring; water pumped by 1,000 g. p. m. Laidlaw-Dunn-Gordon duplex cross-compound steam pump into 50,000 gallon elevated tank and thence flows into distributing system. No water as yet furnished from source (1), the present supply being obtained from source (2). When filtered supply from source (1) is available, source (2) will be used principally as industrial supply by Hershey Chocolate Co. Water soft.

DISTRIBUTION

By gravity at pressure from 55 to 70 pounds. Distributing mains as follows:

Size (inches),	16	12	6	4	Total
Length (miles),	1.1	0.6	1.3	5.0	8.0

Forty fire hydrants, 6-inch.

CONSUMPTION

About 1,000 persons supplied; 281 taps, none metered. Average daily consumption 350,000 gallons; maximum 400,000 gallons, measured by pump displacement; 60% domestic and 40% industrial; latter entirely to Hershey Chocolate Co.

HIGHSPIRE BOROUGH, DAUPHIN COUNTY

HIGHSPIRE WATER COMPANY

PAXTANG CONSOLIDATED WATER COMPANY

(David Gring and others)

Population 1910 census, 1,669; incorporated in 1903. Estimated 1915 population, 2,000a

LOCATION

Southern Dauphin County, along east bank of Susquehanna River; on Pennsylvania R. R., and connected with Middletown and Harrisburg by electric railway.

INDUSTRIES

Highspire distillery.

WATER SUPPLY

Highspire Water Co., incorporated 1901 for Highspire Borough, stock owned by the Paxtang Consolidated Water Co. (controlled by David Gring and others).

SOURCE AND COLLECTION

Springs above borough collected in small reservoir.

DISTRIBUTION

By gravity; pressure from 0 in higher parts of borough to 65 pounds in lower sections. Distributing mains as follows:

Size (inches),	8	6	4	Total
Length (miles),	1.6	1.1	1.1	3.8

No fire hydrants.

CONSUMPTION

About 1,430 persons supplied; 286 taps. Stated average daily consumption, 80,000 gallons, all domestic. No means of measurement. No meters.

HUMMELSTOWN, PAXTANG AND PENBROOK BOROUGHS, AND ADJACENT VILLAGES, DAUPHIN COUNTY

PAXTANG CONSOLIDATED WATER COMPANY
(David Gring and others)

	Population 1910 census	Increase since 1900	Estimated 1915	Supplied
Hummelstown Borough,	2,128	399	2,600	2,150
Paxtang Borough,		(Inc. 1914)	2,000	1,000
Penbrook Borough,	1,462	598	1,500	1,500
Swatara Township:				
Rutherford Hts. (village),			1,000	1,800
Rutherford Hts. (outside),			800	
Susquehanna Township:				
Progress Village,			1,000	4,000
Pleasant View Village,			3,000	
Penna. State Lunatic Hospital,			3,000	3,000
Total,				13,450

LOCATION

Territory in southern Dauphin County, between Hummelstown, on Swatara Creek, and Susquehanna River. Philadelphia & Reading Ry., Pennsylvania R. R. and Harrisburg Rys. Co. (electric) traverse this territory.

INDUSTRIES

Suburban residential district; stone quarry at Swatara Station and classification yards of Philadelphia & Reading Ry. at Rutherford. Site of Pennsylvania State Lunatic Hospital.

WATER SUPPLY

Paxtang Consolidated Water Co., incorporated originally in 1895 as Paxtang Water Co., for Paxtang Village, Swatara Township; with change of name in 1906, is holding company operating in this territory through charters of following controlled companies:

Name	Inc.	Territory
Hummelstown Consolidated Water Co.,	1887	Hummelstown Borough
Susquehanna Township Water Co.,	1907	Susquehanna Township
Extension Water Co. of Penbrook,	1908	Penbrook Borough
Rutherford Heights Water Supply Co.,	1907	Swatara Township
Highspire Water Co.,	1901	Highspire Village Lower Swatara Township
Middletown & Swatara Consolidated Water Co.,	1903	Merger—Middletown and Royalton Boroughs

SOURCE AND COLLECTION

Swatara Creek; intake, pumping station and filter plant in Hummelstown; watershed area 512 square miles. Water raised by 2,000,000 gallon Jeanesville centrifugal pump operated by 20 hp. motor and 2,000,000 gallon Platt Iron Works Troy centrifugal steam pump to 169,000 gallon settling tank; flows by gravity through mechanical filter of six 517,000 gallon units to 75,000 gallon filtered water basin, from which it is pumped,

(1) By 400,000 gallon Deane triplex pump, driven by 50 hp. motor through 8-inch force main to 150,000 gallon standpipe in Hummelstown.

(2) Through 12-inch force main to 1,100,000 gallon reservoir on Chambers Hill, at Rutherford Heights, at elevation 352 feet above and 4.5 miles west of pumping station. Pumping equipment 1,000,000 gallon Deane triplex pump driven by 100 hp. motor, 1,000,000 gallon Jeanesville triplex pump driven by 90 hp. turbine, 2,000,000 gallon Jeanesville triplex steam pump. Power for steam pumps furnished by two 300 hp. Heine boilers.

All water soft.

DISTRIBUTION

From (1) by gravity from standpipe through two 8-inch mains to Hummelstown.

From (2) by gravity through 12-inch main, from distributing reservoir to Paxtang (with a 10-inch branch to Oberlin, where an 8-inch line leads to Enhaut and a 6-inch line to New Benton, under construction). From Paxtang 12-inch main reduces to 10-inch to Penbrook, where 6-inch line leads to Progress, and 10-inch, reducing to 8-inch, 6-inch and 4-inch, to Pleasant View and Pennsylvania State Lunatic Hospital. Supply mains as follows:

Size (inches),	12	10	8	Total
Length (miles),	7.9	2.6	1.1	11.6
Per cent.,	68	22	10	100

Distributing mains (exclusive of above 10-inch and 8-inch mains) as follows:

Size (inches),	6	4	2	Total
Length (miles),	7.0	2.7	0.1	9.8
Per cent.,	71	28	1	100

Pressures 30 to 130 pounds; 59 fire hydrants, principally 4-inch.

CONSUMPTION

About 13,450 persons supplied; about 1,100 taps. Average daily consumption, determined by metering large industrial and commercial consumers and metering and estimating domestic supply, 1,080,000 gallons daily; 650,000 domestic and 430,000 industrial; 324,000 gallons of the latter for Philadelphia & Reading classification yards at Rutherford; of domestic, 340,000 gallons is for Pennsylvania State Lunatic Hospital.

About 420 meters, 34 industrial. Entire domestic supply in Paxtang, Penbrook and Susquehanna Township, and supply to Philadelphia & Reading classification yards at Rutherford and industrial supply in Hummelstown—550,000 gallons domestic and 430,000 gallons industrial—metered.

LANCASTER CITY AND SURROUNDING SUBURBS, LANCASTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 47,227; increase since 1900, 5,768. Estimated 1915, 50,269x

LOCATION

Central Lancaster County, along west bank of Conestoga Creek; on Pennsylvania R. R., Philadelphia & Reading Ry.; center of suburban lines of Conestoga Traction Co. Area 4 square miles, about 75% well built up, with undulating surface, elevations from 240 to 420 feet.

INDUSTRIES

Important agricultural and tobacco growing district; manufactures of cigars, umbrellas, cotton and silk goods, watches, linoleum, locks, jewelers' tools, leather and iron products, soap, candy, cork and radiators. Seat of Franklin and Marshall College.

WATER SUPPLY

Municipal works built 1836 by Lancaster Borough Water Co., and subsequently sold to city. First pumping plant abandoned in 1888 upon completion of present plant. Filter plant installed 1906 by Pennsylvania Maignen Filtration Co. and now owned by Lancaster Water Filtration Co. Every 5 years city can exercise an option to purchase filter plant; at expiration of 30 year period, plant to be turned over to city free of charge.

SOURCE AND COLLECTION

Dam on Conestoga Creek, 0.5 mile east of city limits; watershed area 310 square miles. Two 42-inch pipes from intake a short distance to pump well at pumping station on west bank of creek.

Water raised by two 10,000,000 gallon centrifugal pumps, 45-foot head, through 970 feet of 36-inch pipe across creek to four 140,000 gallon circular settling basins; thence by gravity through 15 preliminary coke and sponge filters called "scrubbers," and 15 slow sand filters, capacity 9,000,000 gallons daily, to 1,650,000 gallon filtered water reservoir, elevation 273; thence by gravity through 30-inch main back across creek to pumping station, where high service pumps lift it (1) through 36-inch force main to East End twin distributing reservoirs on hill in eastern limits of city at elevation 418, capacity 2,500,-

000 and 3,500,000 gallons respectively; (2) through 30-inch, reducing to 24-inch, force main to 400,000 gallon standpipe, overflow elevation 508, for supply of high service district. High service pumping equipment as follows:

Pumps	Capacity in gallons	Year installed
1 Worthington duplex pump (aux.),	6,000,000	1884
1 Worthington duplex pump,	16,000,000	1893
1 P. D. Wood duplex pump,	12,000,000	1903
4 Babcock & Wilcox water tube boilers (reserve),	104 hp. each	1888
2 Babcock & Wilcox water tube boilers,	264 hp. each	1912
2 National boilers,	200 hp. each	1897

Electric pumping equipment at East End reservoirs for emergency use. Water pumped by 10,000,000 gallon centrifugal pump direct-connected to 250 hp. motor taking suction from reservoir through 18-inch force main connected to 24-inch main supplying standpipe. Water medium hard.

DISTRIBUTION

By gravity through high and low service system, at pressures from 24 to 76 pounds. Low service district, a small area directly south of center of city, supplied through 16-inch line from reservoir.

High service district includes most of city supplied from 30-inch force main connecting to standpipe; pressures from 20 to 80 pounds. Distributing mains:

Size (inches),	36	30	24	20	16	12	10	8	6	4	Total
Length (miles),	1.0	1.3	2.0	2.1	2.0	4.4	3.3	9.7	23.5	13.6	62.9
Per cent (in city),	(	10.2		)	(	15.4	)	15.4	37.5	21.5	100

Total in city, 62.9 miles; outside of city, 9.0 miles; total 71.9 miles. Fire hydrants 696; 682 5-inch and 14 4½-inch.

CONSUMPTION

In Lancaster and along pipe lines in suburbs 60,000 persons supplied; 12,519 taps. Average daily total consumption, measured by Venturi meter at pumping station, 7,250,000 gallons, or 121 gallons per capita; maximum 7,500,000; 75% domestic and 25% industrial. Of 262,000 gallons consumed outside city limits, 2,500 gallons supplied to Manheim Township Water Co., 13,800 to West End Water Co. and 245,700 to county institutions and private houses along pipe lines. There are 4,343 taps metered, 10% industrial; metered consumption 758,000 gallons industrial and 101,000 gallons domestic.

COST AND REVENUE

Net cost of plant, $2,000,000; total receipts (1913), $161,400; total expenditures (1913), $95,000. Expenditures do not include interest on bonds, State tax or sinking fund charges, which are taken out of general fund.

SUBURB OF LANCASTER CITY, LANCASTER COUNTY

THE MANHEIM TOWNSHIP WATER CO.

Estimated population, 300a

LOCATION

Central Lancaster County, suburbs of Lancaster City.

INDUSTRIES

Large silk mill nearby.

WATER SUPPLY

The Manheim Township Water Co., incorporated 1912 for portion of Manheim Township, along Lancaster-Lititz turnpike 0.75 mile north of Lancaster City.

SOURCE AND COLLECTION

Water purchased from Lancaster City water works; supply obtained through 6-inch connection at city line.

DISTRIBUTION

By gravity through 0.8 mile of 6-inch and 0.1 mile of 4-inch mains; 13 fire hydrants, 6-inch.

CONSUMPTION

About 65 persons supplied; 16 taps, all metered. Average daily consumption 2,500 gallons, all domestic.

LEBANON CITY, LEBANON COUNTY

MUNICIPAL WATER WORKS

Population 1910 census 19,240; increase since 1900, 1,612. Estimated 1915, 21,000

LOCATION

Central Lebanon County, near headwaters of Quittapahilla Creek; on Philadelphia & Reading Ry. and terminus of Cornwall & Lebanon R. R. Reading Transit Co. connects with electric line from Harrisburg. Covers 2.25 square miles. Range in elevation 40 feet.

INDUSTRIES

Plants of Pennsylvania Steel Co., Lackawanna Iron & Steel Co. and American Iron & Steel Co. just outside the city.

WATER SUPPLY

Municipal works installed 1872.

SOURCE AND COLLECTION

(1) West Branch of Hammer Creek, tributary of Cocalico Creek. Three impounding reservoirs in South Mountain, 6 miles southeast of city, near Lancaster County line, capacities 18,000,000, 14,000,000 and 20,000,000 gallons; watershed area 1.12 square miles. Lower reservoir 150 feet above center of city.

(2) Auxiliary pumping plant at junction of Poplar Run with Hammer Creek, in Lancaster County, 3 miles southeast of above-mentioned reservoirs. Two 2,500,000 gallon Snow high duty steam pumps deliver to 16-inch main from reservoirs through 20-inch force main; watershed area 17 square miles on Hammer Creek and 1.25 square miles on Poplar Run. Hypochlorite treatment plant is being installed at this pumping station.

Water medium hard.

DISTRIBUTION

By gravity and pumping; pressures 58 to 62 pounds. Supply mains as follows:

Size (inches),	20	16	12	Total
Length (miles),	9.7	4.1	5.8	19.6

Distributing mains as follows:

Size (inches),	10	8	6	4	Total
Length (miles),	0.8	6.2	10.0	10.3	27.3
Per cent.,	26		37	37	100

Two hundred and twenty-five fire hydrants, 6-inch.

CONSUMPTION

Entire population supplied; 5,294 taps. Stated average daily consumption 1,850,000 gallons, 280,000 industrial; partly metered. Metered consumption 250,000 gallons daily, entirely industrial.

LEBANON INDEPENDENT, JONESTOWN AND PALMYRA BOROUGHS, AND NEIGHBORING VILLAGES, LEBANON COUNTY

LEBANON VALLEY CONSOLIDATED WATER SUPPLY COMPANY
(David Gring and others)

	Population 1910 census	Increase since 1900	Estimated 1915	Supplied
Jonestown Boro.,	603	32	600	600
Lebanon Independent Boro.,			2,900	4,400*
Palmyra Boro.,	1,950	(Inc. 1914) (Organized 1909)	3,200	
Annville Twp. (part),			2,500	3,300†
N. Annville Twp. (part),			1,200	
S. Annville Twp. (part),			800	
North Londonderry Twp. (part),			300	
North Lebanon Twp.: East Lebanon,	2,000		2,600	2,600
South Lebanon Twp.:				
Avon,	340		350	350
Hebron,	1,200		1,400	1,400
Totals,			15,850	12,650

*Includes part of Eighth Ward of Lebanon City, which was incorporated into Lebanon in 1913.
†Most of population supplied is in Palmyra and Annville.

LOCATION

Suburbs of Lebanon City, in central Lebanon County, near headwaters of Quittapahilla Creek, extending northwest 5 miles to Jones-

town and westward 10 miles to Palmyra; on Lebanon Valley and Lebanon & Pine Grove Branches of Philadelphia & Reading Ry. and Lebanon Traction Co.'s electric lines.

INDUSTRIES

More than 60 industrial plants, including Pennsylvania steel works, American iron & steel works, Philadelphia & Reading Ry. shops, organ and piano works, milling plant, stocking factory and various small industries.

WATER SUPPLY

(1) Lebanon Valley Consolidated Water Supply Co., incorporated 1903 as the Weaverstown Water Co., a merger of Hebron Water Co., incorporated 1903 for South Lebanon Township, and Weaverstown Water Co., incorporated for North Lebanon Township. In 1909 name of Weaverstown Water Co. changed to Lebanon Valley Consolidated Water Supply Co. The Gravel Hill Water Co., incorporated 1909 for North Londonderry Township, purchased by Lebanon Valley Consolidated Water Supply Co. in 1914.

This company operates in this district through charters of the following companies, whose property and franchises were purchased in 1913:

Name	Inc.	Incorporated for
Jonestown Water Supply Co.,	1910	Jonestown Borough
North Annville Water Supply Co.,	1909	North Annville Twp.
South Annville Water Supply Co.,	1909	South Annville Twp.
North Cornwall Water Supply Co.,	1909	North Cornwall Twp.
Annville Water Co.,	1889	Annville Village

This system consists of a trunk main connecting a number of detached communities located chiefly along the Reading and Harrisburgh pike. Heights Water Co., of South Lebanon Township, purchases water from Lebanon Valley Consolidated Water Supply Co.

LEBANON VALLEY CONSOLIDATED WATER SUPPLY COMPANY

SOURCE AND COLLECTION

Intake on Swatara Creek, about 0.75 mile above mouth of Little Swatara Creek, at Jonestown, 5 miles northwest of Lebanon; water pumped to 750,000 gallon sedimentation basin; flows by gravity through 2,000,000 gallon mechanical filter, three units, to 150,000 gallon clear water basin, thence pumped through 16-inch force main to 1,000,000 gallon distributing reservoir on Sand Hill, 2 miles north of center of Lebanon, 280 feet above pumping station and 200 feet above valley of Quittapahilla Creek. Water soft. Pumping installation

2,000,000 gallon cross compound Corliss flywheel condensing steam pump, 3,000,000 gallon cross compound Corliss flywheel condensing steam pump, two 300 hp. Heine water tube boilers.

DISTRIBUTION

Jonestown supplied by 10-inch reducing to 8-inch branch from 16-inch force main near pumping station. Remainder of district supplied by gravity from distributing reservoir through 24-inch main southward to Independent District of Lebanon, where 12-inch main extends eastward and 14-inch reducing to 12-inch and 10-inch main extends westward as far as Palmyra. Length of supply and distributing mains as follows:

										Less than	
Size (inches),	24	20	16	14	12	10	8	6	4	4	Total
Length (miles),	0.5	0.6	4.6	3.2	3.9	4.2	6.5	8.0	16.0	1.0	48.5
Per cent.,	(	12	)	(	15	)	9	13	16	33	2	100

Pressures 50 to 120 pounds; 61 fire hydrants, principally 4-inch.

CONSUMPTION

About 12,600 persons supplied; 61 industrial taps. Average daily consumption, determined by pump displacement and weirs in filter house, 1,500,000 gallons, 700,000 domestic and 800,000 industrial; 269 meters, 61 industrial.

Consumption will be increased shortly by supply of 75,000 gallons daily to Philadelphia & Reading Ry. Co.

INDUSTRIAL SUPPLIES—LEBANON WATER COMPANY

Incorporated 1888 for North Lebanon Township; owned by Pennsylvania Steel Co. and used for industrial supply to its plant.

SOURCE AND COLLECTION

(1) Stovers Dam, on tributary of Quittapahilla Creek, 1.5 miles northwest of Lebanon; watershed area 697 acres.

(2) Forneys Dam, on Branch of Brandywine Creek, 1.25 miles north of Lebanon; watershed area 179 acres.

(3) Fortnas Dam, submerging two other dams on Brandywine Creek, 1.25 miles northwest of Lebanon; receives a supply from flow of artesian well 1 mile north; watershed area 315 acres.

(4) Ebenezer dam, on Clarks Run, tributary of Swatara Creek, 2.5 miles northwest of Lebanon; watershed area 380 acres.

(5) Additional supply in dry weather from large underground stream, which flows into quarry near plant, on property of Pennsylvania Steel Co.

All water except that from No. 5 supply soft; latter used only for quenching purposes.

DISTRIBUTION

To Pennsylvania Steel Co. plant as follows:

From (1) by gravity through 6-inch line; 10-inch line to American Iron & Steel Co. (operations discontinued).

From (2) by gravity through 6-inch line.

From (3) by gravity through 12-inch line.

(4) Water from Ebenezer Dam flows down Clarks Run through old tunnel of Union Canal to steel plant.

From (5) by pumping, 1,000,000 gallons per day in dry weather.

Pumping installation at quarry 750,000 gallon duplex steam pump operated by steam plant at blast furnaces. Pressures about 20 pounds; 8 fire hydrants, 4-inch.

CONSUMPTION

Only domestic supply is to two families in Independent District. Average daily consumption 500,000 gallons through six taps. No means of measuring.

LITITZ BOROUGH, LANCASTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 2,082; increase since 1900, 445. Estimated 1915, 2,300

LOCATION

Northern central Lancaster County, on Lititz Run, tributary of Conestoga Creek; on Philadelphia & Reading Ry. and Conestoga traction lines. Range in elevation 42 feet.

INDUSTRIES

Cigar factory, cocoa and chocolate works, underwear, shoe, starch, paper box and cigar box factories.

WATER SUPPLY

Municipal works built 1893 by Lititz Water Co., incorporated 1887 and purchased by borough in 1906. Most of industries obtain their own supply from artesian wells.

SOURCE AND COLLECTION

Water pumped from artesian well in western part of borough, outside of built-up section, through 6-inch main to 150,000 gallon standpipe nearby. Pumping station equipment 750 g. p. m. Snow steam pump, 750 g. p. m. Smith-Vaile steam pump, 80 hp. Meadville boiler, 50 hp. Pottstown boiler. One pump and one boiler in reserve. Water medium hard.

DISTRIBUTION

By gravity; pressures 40 to 60 pounds. In emergencies pressure can be increased to 150 pounds. Distributing mains as follows:

Size (inches),	12	8	6	4	Total
Length (miles),	0.2	1.0	1.0	1.9	4.1

Forty-five fire hydrants, 6-inch and 8-inch.

CONSUMPTION

About 2,800 persons supplied, some being outside borough limits; 542 taps. Average daily consumption, measured by pump displacement, 150,000 gallons; maximum 400,000 gallons; 50% industrial; 375 taps metered, 15 industrial.

COST AND REVENUE

Total cost of works, $45,000; annual operating expenses, $2,000; gross revenue, $6,500.

MANHEIM BOROUGH, LANCASTER COUNTY

MANHEIM WATER COMPANY

1910 population 2,202; increase since 1900, 183. Estimated 1915, 2,500

LOCATION

Northern central Lancaster County, on upper portion of Chickies Creek; on Philadelphia & Reading Ry. and connected with Lancaster by Conestoga traction line. Range in elevation 30 feet.

INDUSTRIES

Rich agricultural district; machine shop, belting works, flour mill, asbestos works, hose factory, shirt factory and cigar factories.

WATER SUPPLY

Manheim Water Co., incorporated 1884 for Manheim Township.

SOURCE AND COLLECTION

Rife Run, tributary of Chickies Creek, joining it 0.5 mile below borough, fed by eight or ten springs; watershed area 12 square miles. Intake 1 mile above mouth, just southwest of borough. Water pumped through 1,460 feet of main to 750,000 gallon reservoir on hill 135 feet above, and 0.25 mile west of, intake and just north of borough line. Water soft. Pumping equipment 150 g. p. m. Gould triplex pump operated by 30 hp. gas engine, and 300 g. p. m. Worthington steam pump operated by 45 hp. boiler in reserve.

DISTRIBUTION

By gravity; pressures 60 to 65 pounds. Distributing mains:

Size (inches),	8	6	4	3	Total
Length (miles),	0.1	2.6	0.7	1.3	4.7

Seventy-eight fire hydrants, 4-inch.

CONSUMPTION

About 2,400 persons supplied; 543 taps, none metered. Average daily consumption 125,000 gallons, determined by pump displacement and fall of water in reservoir; 25% industrial.

MARIETTA BOROUGH AND EAST DONEGAL TOWNSHIP, LANCASTER COUNTY

THE MARIETTA GRAVITY WATER COMPANY

Population of Marietta Borough, 1910 census, 2,079; decrease since 1900, 390. Estimated 1915, 2,000b

LOCATION

Northwestern Lancaster County, on east bank of Susquehanna River, just above mouth of Chickies Creek; on Philadelphia Division of Pennsylvania R. R., connected with Lancaster by Conestoga Traction Co. Range in elevations 260 to 300 feet above sea level.

INDUSTRIES

Three casting companies, silk mill, cigar factory and shirt factory.

WATER SUPPLY

The Marietta Gravity Water Co., incorporated 1892 for Marietta Borough, works built in 1894.

SOURCE AND COLLECTION

(1) Reservoir, 1,400,000 gallons capacity, near source of Wildcat Run, tributary of Susquehanna River, across river from borough, in York County; area of watershed 1 square mile. Minimum daily flow, measured in 1909, 136,000 gallons. Elevation of reservoir about 460 feet above sea level.

(2) Reservoir, 900,000 gallons capacity, near source of Dugan Run, tributary of Susquehanna River, across river from borough, in York County; area of watershed, 1.5 square miles. Minimum daily flow, measured in 1909, 75,000 gallons. At present only Wildcat Run reservoir being used.

(3) Three wells sunk in bed of Susquehanna River, used only in case of emergency; have not been used since 1911.

Pumping equipment 650 g. p. m. horizontal duplex direct acting Snow steam pump. Water soft.

DISTRIBUTION

By gravity through 1 mile of 8-inch main from each reservoir, crossing under river. Distributing mains as follows:

Size (inches),	12	10	8	6	4	2	Total
Length (miles),	1.3	0.4	0.7	3.6	0.4	0.2	6.0

Pressures 80 to 90 pounds.

CONSUMPTION

About 2,000 persons supplied; 525 taps. Stated average daily consumption 85,000 gallons; maximum 98,000; 75% domestic. No means of measurement.

MARYSVILLE BOROUGH, PERRY COUNTY

MARYSVILLE WATER COMPANY

Population 1910 census, 1,693; increase since 1900, 230. Estimated 1915, 2,000

LOCATION

Southeastern corner Perry County, on west bank of Susquehanna River and Fishing Creek, about 7 miles north of Harrisburg; on Pennsylvania R. R. and connected with Harrisburg by Valley Traction.

INDUSTRIES

Railroad yards, chain factory, charcoal forge and stone quarry.

WATER SUPPLY

Marysville Water Co., incorporated 1895 for Marysville Borough.

SOURCE AND COLLECTION

(1) Intake dam on Trout Run, tributary of Fishing Creek, 1.25 miles west of borough; watershed area 1.5 square miles. Water flows through 6-inch gravity main to 250,000 gallon equalizing reservoir in northwestern corner of borough.

(2) Sitterly Spring, 1 mile northwest of borough; watershed area 1 square mile. Water flows through 4-inch gravity main; minimum daily flow 30,000 gallons.

(3) Small intake on Lambs Gap Run, tributary of Fishing Creek, 4.5 miles west of borough; watershed area 5 square miles; 8-inch gravity main to distributing reservoir.

(4) Pumping station on Susquehanna River, in southern end of borough, with 6-inch intake extending 500 feet into river. Used only for industrial supply to railroad in dry seasons, pumping through 6-inch force main direct to railroad tanks. Pumping equipment 432,000 gallon Goodrich triplex pump operated by 20 hp. Westinghouse motors. All water soft.

DISTRIBUTION

By gravity; pressures 30 to 78 pounds. Distributing mains:

Size (inches),	8	6	4	3	Total
Length (miles),	0.4	0.4	0.7	1.9	3.4

Twenty-eight fire hydrants, 2½-inch.

CONSUMPTION

About 1,800 persons supplied; 428 taps. Average daily consumption 400,000 gallons, determined by metering a portion and estimating balance; 25% domestic and 75% industrial; 228 taps metered, four industrial (for P. R. R.). Metered consumption 300,000 gallons industrial and 75,000 gallons domestic.

PROPOSED

Storage reservoir, capacity 1,000,000 gallons, formed by excavation in natural ravine in extreme southern part of borough, to be held in reserve for fire protection; gravity 8-inch main to distributing system.

MECHANICSBURG BOROUGH, CUMBERLAND COUNTY

MECHANICSBURG GAS AND WATER COMPANY

Population 1910 census, 4,469; increase since 1900, 628. Estimated 1915, 5,000

LOCATION

Eastern Cumberland County, on Trindle Spring Run, small tributary of Conodoguinet Creek; on Cumberland Valley R. R. and connected with Carlisle and Harrisburg by Valley Traction Co.'s line.

INDUSTRIES

Three spoke works, drop forging works and two foundries.

WATER SUPPLY

Mechanicsburg Gas and Water Co., incorporated 1854 for Mechanicsburg Borough.

SOURCE AND COLLECTION

(1) Several springs 2 miles southeast of borough, collected by 4-inch to 10-inch drain into 1,000,000 gallon reservoir connected by tunnel several hundred feet long to 400,000 gallon distributing reservoir; watershed area 0.75 square mile.

(2) Storage dam on Yellow Breeches Creek, at Miller's Mill, about 3.5 miles southeast of Mechanicsburg Borough; watershed area about 215 square miles. Water raised by low lift pump to 250,000 gallon circular concrete subsidence tank; by gravity to 500,000 gallon "Pitts-

burgh" mechanical filter tank, with 200,000 gallon filtered water basin underneath; forced by 750,000 gallon triplex pump (with 500,000 gallon triplex in reserve) to 3,000,000 gallon distributing reservoir near the other reservoirs south of borough and 100 feet above it.

Pumps operated by two 32-inch turbines under head of 7 feet, developing 90 hp.

(3) Intake and pumping station on Trindle Spring, 1 mile southwest of Mechanicsburg, abandoned.

DISTRIBUTION

By gravity through 5.5 miles of 10-inch supply main from distributing reservoirs; pressures, 37 to 60 pounds; distributing mains 6.5 miles; 53 fire hydrants.

CONSUMPTION

About 4,000 people supplied; 700 taps. Average daily consumption, measured by pump displacement, 500,000 gallons, all domestic. Three taps metered, two industrial.

MIDDLETOWN AND ROYALTON BOROUGHS, DAUPHIN COUNTY

MIDDLETOWN AND SWATARA CONSOLIDATED WATER CO.
(THE PAXTANG CONSOLIDATED WATER CO.)
(David Gring and others)

	Population 1910 census	Decrease since 1900	Estimated 1915
Middletown,	5,374	234	6,000a
Royalton,	1,033	73	

LOCATION

Adjoining boroughs in southern Dauphin County, along east bank of Susquehanna River, on opposite sides of Swatara Creek; on Philadelphia Division of Pennsylvania R. R.; Hummelstown Branch of Philadelphia & Reading Ry., and connected with Harrisburg by electric railway. Range of elevation in district served, 75 feet.

INDUSTRIES

Middletown car works, stove works, cigar factory, shoe factory and brick works.

WATER SUPPLY

Paxtang Consolidated Water Co., through charter of Middletown and Swatara Consolidated Water Co., which it controls. The Middletown Water Co. was incorporated 1884 for supply of Middletown Borough; in 1897 it went into the hands of a receiver, was sold at sheriff's sale and reorganized, with change of name to Middletown Consolidated Water Co. In 1902 the Londonderry Water Co. was incorporated to supply Royalton Borough, and in the same year it was merged with the Middletown Consolidated Water Co., the name being changed to Middletown and Swatara Consolidated Water Co.

SOURCE AND COLLECTION

(1) Principal supply from 15,000,000 gallon impounding reservoir on Iron Mine Run, tributary of Swatara Creek, 2 miles northeast of Middletown. Water by gravity through 12-inch main carrying raw water to Royalton, there crossing over the creek to Middletown, to 150,000 gallon sedimentation basin, 3½ hours subsidence; thence through two unit 1,000,000 gallon mechanical filter to 45,000 gallon clear water basin, from which it is pumped to 191,000 gallon standpipe. Watershed area 4 square miles. Water very soft.

(2) Auxiliary supply pumped from headrace along Swatara Creek, to filtration plant and thence as above described. In emergencies filters can be by-passed and water pumped directly into system. Hydraulic pumping plant installed in old mill. Watershed area about 567 square miles. Water medium hard.

Pumping equipment as follows: In mill 1,000,000 gallon Platt Iron Works triplex pump operated by 36-inch Morgan-Smith turbine, average working head 9 feet; at filter plant 1,700,000 gallon Worthington duplex compound piston type pump and two 125 hp. return tubular boilers.

These pumps furnish fire supply by direct pumpage from Swatara Creek.

DISTRIBUTION

By gravity from standpipe, only Middletown being supplied with filtered water; raw water supplied to Royalton, there being but few domestic consumers there, most of supply being used by Pennsylvania R. R. Distributing mains as follows:

Size (inches),	12	10	8	6	4	2	Total
Length (miles),	1.6	0.2	1.2	2.1	5.7	0.2	11.0
Per cent.,	16		11	19	52	2	100

Pressures 28 to 65 pounds, 65 to 100 pounds fire pressure; 40 fire hydrants, 7-inch.

CONSUMPTION

About 4,000 people supplied; 916 taps. Average daily consumption 600,000 gallons, 60% domestic and 40% industrial; 100 taps metered, 25% industrial.

MOUNT GRETNA VILLAGE, LEBANON COUNTY

PRIVATE WATER SUPPLY

Estimated population, 1,250.

LOCATION

Southern Lebanon County, at headwaters of Conewago Creek; on Cornwall & Lebanon R. R.

Summer resort. Campmeeting grounds of United Brethren Church, Summer school and Assembly of Pennsylvania Chautauqua Association. Military rifle range owned by State. Summer hotel and picnic grounds operated by railroad company. Encampment grounds and picnic grounds are property of Coleman Estate, which owns several thousand acres in this vicinity.

WATER SUPPLY

Railroad station and picnic grounds have gravity system known as Bubbling Spring supply. Military encampment supplied from deep well, with auxiliary surface supply from artificial pond north of railroad tracks. Rifle range has spring from which water is pumped to a reservoir. A drilled well is proposed as auxiliary. Chautauqua Assembly supplied by Mt. Gretna Water Co., a private unchartered company, works built in 1903. Numerous springs and wells for individual private use.

MT. GRETNA WATER COMPANY (Unincorporated)

SOURCE AND COLLECTION

(1) New supply 8-inch drilled well, 365 feet deep, at top of ridge overlooking grounds. Gould deep well pump, capacity 72,000 gallons daily, driven by gasoline engine, delivers to 135,000 gallon stone masonry reservoir.

(2) Old supply by pumping from drilled well near artificial pond called Conewago Lake; maintained for emergencies.

DISTRIBUTION

By gravity; 4-inch main 1,700 feet, to distributing system; connection to adjacent 30,000 gallon tank, which was old reservoir, now maintained full for emergency fire purposes; 2-inch laterals.

CONSUMPTION

Supply to 1,250 people in 129 cottages in summer; 524 taps; not operated during winter. Average daily consumption 43,000 gallons, entirely domestic, measured by pump displacement.

CAMPMEETING GROUNDS

SOURCE AND COLLECTION

Drilled well 300 feet deep water pumped to a distributing reservoir.

DISTRIBUTION

By gravity to cottages. Water from three springs used for drinking purposes.

MOUNT HOLLY SPRINGS BOROUGH, CUMBERLAND COUNTY

MOUNT HOLLY WATER COMPANY

Population 1910 census, 1,272; decrease since 1900, 56. Estimated 1915, 1,200

LOCATION

Southeastern Cumberland County, on Mountain Creek, tributary of Yellow Breeches Creek; on Philadelphia & Reading Ry., and connected with Carlisle by trolley. Highest point in district supplied is about 100 feet above center of distribution.

INDUSTRIES

Several paper mills (at present not in operation).

WATER SUPPLY

Mount Holly Water Co., incorporated 1895 for Mt. Holly Springs Borough.

SOURCE AND COLLECTION

(1) A 1,500,000 gallon storage and distributing reservoir on Spruce Run, tributary of Yellow Breeches Creek, 3 miles west of borough, 140 feet above center of distribution.

(2) Additional supply from Cold Spring nearby; 12-inch intake with copper screen. Watershed area 900 acres. Water soft.

DISTRIBUTION

By gravity through 10-inch main to distributing system. Distributing mains as follows:

Size (inches),	8	6	4	**Total**
Length (miles),	0.1	0.1	2.0	2.2

Pressures 60 to 70 pounds; 22 fire hydrants $2\frac{1}{4}$-inch.

CONSUMPTION

About 1,000 persons supplied; 225 taps. Average daily consumption 75,000 gallons, occasionaly measured by weir; 90% domestic and 10% industrial.

MOUNT JOY BOROUGH, LANCASTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 2,165; increase since 1900, 148. Estimated 1915, 2,500.

LOCATION

Northwestern Lancaster County, on west bank of Little Chickies Creek; Philadelphia Division of Pennsylvania R. R., and connected with Lancaster, 12 miles east, by Conestoga Traction Co. Range in elevation about 30 feet.

INDUSTRIES

Grey iron novelty works, two cotton mills, cigar factory, tobacco warehouses and hardware works.

WATER SUPPLY

Municipal works built in 1874.

SOURCE AND COLLECTION

A 211,000 gallon intake near mouth of Little Chickies Creek, tributary of Chickies Creek. Water power, gasoline and steam pumps raise water to 750,000 gallon reservoir on hill 0.25 mile west of creek. Pumping by water power from creek as long as head of 10 feet is available. Minimum flow of stream many times the amount consumed; area of watershed 16 square miles. Water soft. Pumping equipment 60-inch turbine operating under head of 4 feet and developing 14 hp., 50,000 gallon Worthington steam pump operated by 45 hp. boiler, 50 hp. Otto gasoline engine. Pumps operated by turbine when sufficient power available.

DISTRIBUTION

By gravity through 0.5 mile of 8-inch main to distributing mains, consisting of 3.5 miles of 4-inch and 0.5 mile 6-inch pipes; pressures 30 to 50 pounds; 35 fire hydrants, 2½-inch.

CONSUMPTION

About 2,300 persons supplied; 460 taps. Average daily consumption, determined by pump displacement, 500,000 gallons; maximum 600,000 gallons, 50% domestic and 50% industrial.

COST AND REVENUE

Total cost of works, $58,000; annual operating expenses, $2,800; gross revenue, $5,500.

MOUNTVILLE BOROUGH, LANCASTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 803; incorporated 1906. Estimated 1915 population, 804a

LOCATION

Western Lancaster County, between Columbia and Lancaster, on ridge between west branch of Little Conestoga Creek and Strickler Run; on Philadelphia Division of Pennsylvania R. R.

INDUSTRIES

Cigar and tobacco factories, plow works and brick works.

WATER SUPPLY

Municipal works installed in 1908.

SOURCE AND COLLECTION

Four springs 1 mile north of west end of borough, at head of main branch of Strickler Run. Water from spring (1) flows through 3-inch pipe downstream 400 feet; joined by 3-inch pipe from spring (2); continues as 4-inch main 300 feet to 300,000 gallon collecting reservoir. Water from spring (3) flows through 3-inch pipe 150 feet, and from spring (4) through 3-inch pipe 175 feet, to collecting reservoir.

Auxiliary supply during dry seasons from 6-inch drilled well 142 feet deep, near reservoir. Water pumped by 24,000 gallon Barry & Zecher deep well pump, belt-connected to 3 hp. gasoline engine and having 2-inch discharge, 20 feet to reservoir. Water soft.

DISTRIBUTION

By gravity through 8-inch main 3,600 feet to distributing system; 3.0 miles of 4-inch and 0.7 mile 6-inch distributing mains; pressures 36 to 73 pounds; 31 fire hydrants, 8-inch.

CONSUMPTION

About 600 persons supplied; 140 taps; three industrial. Average daily consumption 11,000 gallons, entirely metered; 2,700 gallons industrial.

COST AND REVENUE

Total cost of works, $22,800; annual operating expenses, $75, gross revenue, $1,225.

NEW BLOOMFIELD BOROUGH, PERRY COUNTY

BLOOMFIELD WATER AND SEWER COMPANY

Population 1910 census, 762; decrease since 1900, 10. Estimated 1915, 762a

LOCATION

Seat of, and in center of, Perry County, on Little Juniata Creek; on Susquehanna River & Western R. R. Borough from 15 to 125 feet below reservoir.

INDUSTRIES

Farming community; rim factory, stocking factory and flour mill.

WATER SUPPLY

Bloomfield Water and Sewer Co., incorporated 1893 for Bloomfield Borough.

SOURCE AND COLLECTION

Several springs 1 mile northwest of borough flow into walled-up underground channel with 6-inch main to 40,000 gallon reservoir in northern part of borough. Minimum daily yield stated to be 100,000 gallons. Watershed area 200 acres. Water medium hard.

DISTRIBUTION

By gravity through 0.5 mile 6-inch and 0.7 mile 4-inch; pressure from 6 to 55 pounds; 14 fire hydrants, 8-inch.

CONSUMPTION

About 600 persons supplied; 150 taps. Average daily consumption 25,000 gallons; maximum 50,000 gallons, 75% domestic and 25% industrial. No means of measurement.

NEW CUMBERLAND, LEMOYNE, CAMP HILL, WORMLEYSBURG, SHIREMANSTOWN AND WEST FAIRVIEW BOROUGHS AND ADJOINING VILLAGES, CUMBERLAND COUNTY

RIVERTON CONSOLIDATED WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Lemoyne Borough,	1,393	(Inc. 1907)	1,610
New Cumberland Borough,	1,472	437	1,705
Camp Hill Borough,	875	515	1,010
Wormleysburg Borough,		(Inc. 1908)	936
Shiremanstown Borough,	545	41	632
West Fairview Borough,			
White Hill Village (East Pennsboro Twp.),			
Washington Hts. Village (East Pennsboro Twp.),			
S. Enola Village (East Pennsboro Twp.),			
Dale Estate (East Pennsboro Twp.),			
Bella Vista Village (Lower Allen Twp.),			
New Market Village (Lower Allen Twp.),			
Elkwood Village (Lower Allen Twp.),			
Rosemont Village (Lower Allen Twp.),			
Hillside Village (Lower Allen Twp.),			

LOCATION

Eastern Cumberland County, on west bank of Susquehanna River, and directly across from Harrisburg; on Pennsylvania R. R., Cumberland Valley R. R., Philadelphia & Reading Ry., and Valley Traction Co.'s lines. Territory comprises 6 boroughs and 10 villages.

INDUSTRIES

Suburban residential district; dye works.

WATER SUPPLY

Riverton Consolidated Water Co., incorporated 1904 as merger of six companies in York and Cumberland counties, as follows:

Company	Inc.	Incorporated for
Allen Spring Water Co.,	1901	Allen Twp., Cumberland Co.
East Pennsboro Water Co.,	1901	E. Pennsboro Twp., Cumberland Co.
The Mountain Water Co. of New Cumberland,	1896	New Cumberland Boro., Cumberland Co.
Riverton Water Co.,	1904	Lemoyne Boro., Cumberland Co.
Susquehanna Water Supply Co. (The),	1897	Camp Hill Boro., Cumberland Co.
Fairview Township Water Co.,	1903	Fairview Twp., York Co.

Riverton Consolidated Water Co. also owns a controlling interest in the Shiremanstown Water Co., incorporated 1903 for Shiremanstown Borough and owns the capital stock and has leased the property and franchises of the West Shore Water Co., incorporated 1910 for East Pennsboro Twp., Cumberland County.

SOURCE AND COLLECTION

(1) A 1,500,000 gallon storage reservoir on Eichinger Run, 0.5 mile below source in York County, 2 miles south of New Cumberland, at elevation 520; watershed area 0.33 square mile.

Two reservoirs, capacities 1,500,000 gallons and 750,000 gallons, near source of Shaffer Springs Run, 1 mile west of other reservoir and connected to it, elevation 520; watershed area 0.66 square mile. Water soft.

(2) Water pumped from intake on Yellow Breeches Creek, at Ross Mill 0.13 mile south of New Cumberland, at elevation 310, to settling basin; thence by gravity through 1,500,000 gallon mechanical filter plant to clear water reservoir and pumped to 400,000 gallon standpipe on Fort Washington Hill, top elevation 588, and a 500,000 gallon low service reservoir. Pumping station installation two 750,000 gallon Deane vertical triplex pumps and two 90 hp. vertical 42-inch Smith turbines. Water medium hard.

DISTRIBUTION

From (1) by gravity through 6-inch main from each reservoir, connecting at New Cumberland. Supplies to district south of Cumberland Valley R. R.

From (2) by gravity through 16-inch reducing to 6-inch, main. Supplies district north of Cumberland Valley R. R. Supply mains:

Size (inches),	16	6	Total
Length (miles),	3.0	4.6	7.6

Distributing mains:

Size (inches),	16	12	10	8	6	4	4	Total
Length (miles),	1.1	2.9	1.1	5.9	2.4	10.4	2.5	26.3
Per cent.,	(	19	)	23	9	39	10	100

Pressures 45 to 88 pounds; 54 fire hydrants, 4-inch.

CONSUMPTION

About 8,925 persons supplied; 1,880 taps; 530 meters. Average daily consumption, determined by pump displacement, 210,000 gallons; maximum 306,000 gallons.

NEW FREEDOM BOROUGH, YORK COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 726; increase since 1900, 176. Estimated 1915, 1,100a

LOCATION

Extreme southern York County, 1 mile north of Maryland line; on Northern Central Division of Pennsylvania R. R.

INDUSTRIES

Wire cloth, sewing machine, and several other factories.

WATER SUPPLY

Municipal works installed in 1904.

SOURCE AND COLLECTION

Two drilled wells, one in borough 8-inch diameter 127 feet deep, and one on outskirts 8-inch diameter and 102 feet deep. Water pumped to 30,000 gallon wooden tank on high ground at edge of borough. Another well near the last, 6-inch diameter and 85 feet deep, available but not used. Minimum flow of wells 130,000 gallons daily. Water medium hard. Pumping station equipment 86,000 gallon Stillwell Biesce compound pump, Blaisdell compressor, 3 hp. motor, two 100 hp. return tubular boilers.

DISTRIBUTION

By gravity through 2.2 miles principally 6-inch and 4-inch mains; pressures 60 to 65 pounds; 21 fire hydrants are 6-inch and 5 are 4-inch.

CONSUMPTION

About 800 persons supplied; 83 taps. Stated average daily consumption 25,000 gallons, maximum 28,000; 80% domestic and 20% industrial. No means of measurement. Supplies laundry, sewing factory, wire cloth factory, Atlantic Refining Co., and Pennsylvania R. R. for drinking purposes. Five taps metered, two industrial; metered consumption 500 gallons daily industrial, 200 gallons domestic.

NEW HOLLAND BOROUGH, LANCASTER COUNTY

NEW HOLLAND WATER COMPANY

Population 1910 census, 1,106; increase since 1900, 204. Estimated 1915, 1,350a

LOCATION

Northeastern Lancaster County, near headwaters of Mill Creek, tributary of Conestoga Creek; on New Holland Branch of Pennsylvania R. R. and connected with Lancaster by Conestoga Traction Co. Range in elevation in district supplied 30 feet.

INDUSTRIES

Silk mill, machine shop and wagon works.

WATER SUPPLY

New Holland Water Co., incorporated 1895 for New Holland Borough.

SOURCE AND COLLECTION

Schupps Springs, on northwest slope of Welsh Mountain, 3 miles southeast of borough. Water piped to distributing system through 0.25 mile 10-inch and 2 miles 8-inch mains. Springs about 140 feet above borough. Minimum flow, 1913, as measured by meter, 60,000 gallons daily. Water soft.

DISTRIBUTION

By gravity at pressures of 25 to 50 pounds. Distributing mains as follows:

Size (inches),	8	6	4	Total
Length (miles),	0.3	2.7	0.1	3.1

No fire hydrants.

CONSUMPTION

About 1,100 persons supplied; 240 taps. Average daily consumption, measured by meter at different periods, 45,000 gallons; maximum 55,000 gallons; 66% domestic and 33% industrial.

Supplies Pennsylvania R. R. with 8,000 gallons and silk mill with 2,000 gallons daily. Fifteen taps metered; three industrial. Metered consumption 6,000 gallons daily industrial and 2,000 domestic.

NEW OXFORD BOROUGH, ADAMS COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 838; increase since 1900, 175. Estimated 1915, 875.

LOCATION

Eastern Adams County, near Little Conewago Creek; on Western Maryland R. R.

INDUSTRIES

Three shoe factories, chain factory, foundry and machine shop, creamery and cigar factory.

WATER SUPPLY

Municipal plant built in 1896.

SOURCE AND COLLECTION

Filter crib on banks of South Branch of Conewago Creek 0.75 mile southwest of borough, discharging to pump well; water pumped to 120,000 gallon standpipe in northeastern part of borough. Capacity of plant limited by filter crib to 120,000 gallons daily. Water hard. Pumping station installation White & Middletown 20 hp. gasoline engine; 300,000 gallon pump.

DISTRIBUTION

By gravity; pressure 40 to 45 pounds. Distributing and supply mains as follows

Size (inches),	8	6	4	3	Total
Length (miles),	0.1	0.9	1.9	0.4	3.3

Twenty-nine fire hydrants, 3 with 6-inch and 26 with 4-inch barrels.

CONSUMPTION

About 450 persons supplied; 120 taps. Stated average daily consumption 30,000 gallons, 50% domestic. No means of measurement.

PROPOSED FILTERS

Filter plant to be placed in excavations made for dug well, 40 feet from creek, in sandstone formation which yielded no water. Water will flow from intake in creek to 110,000 gallon subsidence basin, thence through filter unit of 276,000 gallons capacity to 120,000 gallon clear well underneath, then raised by pump to present standpipe. Expected to be in operation by January 1, 1915.

NEWVILLE BOROUGH, CUMBERLAND COUNTY

THE NEWVILLE WATER COMPANY
(H. E. Ahrens and others)

Population 1910 census, 1,449; decrease since 1900, 206. Estimated 1915, 1,500.

LOCATION

Western Cumberland County, on a tributary of Conodoguinet Creek; on Cumberland Valley R. R.; connected by trolley to Carlisle.

INDUSTRIES

Agricultural community; Newville Knitting Co.

WATER SUPPLY

The Newville Water Co., incorporated 1890 for Newville Borough. Controlled by H. E. Ahrens and others, of Reading, Pa.

SOURCE AND COLLECTION

Cool Spring, near Big Spring Run, tributary to Conodoguinet Creek, in eastern part of borough. Flow by gravity to pump well, thence pumped to 250,000 gallon distributing reservoir in southern part of borough. Water medium hard. Pumping equipment 100,000 gallon Deming triplex pump operated by water power installation on Big Spring Run, consisting of 4.5-foot water wheel, generating 30 hp. under 6-foot head.

DISTRIBUTION

By gravity through 3.5 miles of 8-inch, reducing to 6-inch and 4-inch main, at pressures of 20 to 45 pounds; 25 fire hydrants, 4-inch.

CONSUMPTION

About 800 persons supplied; 308 taps. Stated average daily consumption 40,000 gallons, 4,000 industrial. No means of measurement.

OXFORD BOROUGH, CHESTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 2,390; increase since 1900, 358. Estimated 1915, 2,500a

LOCATION

Southwestern corner of Chester County, at headwaters of several tributaries of Big Elk and Octoraro Creeks, tributaries of Susquehanna River; on Philadelphia, Baltimore & Washington R. R.

INDUSTRIES

Confectionery factory, creamery, electric light plant, gas plant, railroad roundhouse.

WATER SUPPLY

Municipal works built in 1868 by Oxford Gas and Water Co. and purchased by the borough 1872 for $55,000.

SOURCE AND COLLECTION

Three artesian wells on ridge 0.25 mile north of borough, No. 3 not in use at present. Water pumped from wells by two Deming deep well pumps, capacity 100,000 gallons, into 400,000 gallon reservoir; thence lifted by Kingston pump to standpipe. Deep well pumps can pump from well to standpipe when necessary. Water soft.

DISTRIBUTION

By gravity; pressures 30 to 40 pounds. Supply and distributing mains as follows:

Size (inches),	12	6	4	4	Total
Length (miles),	0.9	1.5	3.8	0.6	6.8

Forty-five fire hydrants, 4-inch.

CONSUMPTION

About 2,000 persons supplied; 500 taps, 18 metered. Average daily consumption, determined by fall of water in standpipe, 60,000 gallons; maximum 70,000 gallons; 18% industrial.

INDUSTRIAL SUPPLIES

All industries except roundhouse obtain supply from private wells; supplies by borough in emergencies.

PALMYRA BOROUGH, LEBANON COUNTY

THE LONDONDERRY WATER COMPANY

Estimated 1915 population, 2,240

LOCATION

Southwestern Lebanon County; on Philadelphia & Reading Ry., 10 miles west of Lebanon and connected by trolley with Lebanon and Harrisburg. Borough proper comparatively level; range in elevation 10 feet.

INDUSTRIES

Carriage works, two hosiery mills, three shoe factories, flour and planing mill.

WATER SUPPLY

First public supply 1853, owned by Martin Early, said to have had grant from Legislature, but no records of same can be found. Still used as one of sources. The Londonderry Water Co., incorporated 1883 for Palmyra, for 30 years, took over these works and built additional ones in 1884. Company reincorporated in 1911.

SOURCE AND COLLECTION

Four groups of springs and wells on hillside 0.75 to 1 mile north of village, scattered over stretch of 1 mile. Two most easterly groups about 750 feet apart; upper one original Early plant.

(1) Covered brick reservoir, 7,500 gallons capacity collecting water from four adjacent drilled wells 6-inch bore 70 to 100 feet deep, from which water was originally pumped by windmills now dismantled. Only two of these wells in service; now being used in emergency at time of drought. Water siphoned from one and raised by means of traction engine driven pump from other, discharging into reservoir and thence through original 2-inch pipe to lower reservoir next described.

(2) Spring, walled up and covered, discharges into 54,000 gallon covered distributing reservoir; also fed from Early reservoir.

(3) Several springs and nine drilled wells, about 1,800 feet directly east of sources (1) and (2), discharge into 2,000,000 gallon storage reservoir, which discharges into 54,000 gallon concrete distributing reservoir. Seven wells 100 feet deep, one 210 feet and one 600 feet. Three are 8-inch bore, others 6-inch; five are flowing wells, three pumped by 25 to 40 g. p. m. gasoline engine driven pumps, and one by 50,000 gallon steam pump; pumping necessary only in summer.

(4) Springs and two drilled wells 3,200 feet east of source (3); water collected into 150,000 gallon covered reservoir. Water from one well of 6-inch diameter and 600 feet deep, siphoned through 1-inch pipe to reservoir; the other, 6-inch diameter and 400 feet deep, now out of use. Pumping necessary only 3 months of year. Watershed area 18 acres. Water soft.

DISTRIBUTION

By gravity; reservoir at source (3) controls pressure, being lowest in system and inter-connected with supply mains from other sources. A 4-inch pipe line from (4) connects with 8-inch from (3) and 4-inch from (2), two latter continuing directly into distributing system in village. Supply mains 1.5 miles 4-inch and 0.5 mile 8-inch.

Distributing mains as follows:

Size (inches),	8	6	4	3	Total
Length (miles),	0.8	0.2	5.0	1.5	7.5

Pressures from 20 to 25 pounds; 12 fire hydrants, 4-inch.

CONSUMPTION

About 2,300 persons supplied; 391 taps; 14 metered. Stated average daily consumption 110,000 gallons, maximum 115,000 gallons, 85% domestic. No means of measurement. Metered consumption 9,100 gallons industrial and 1,100 gallons domestic.

PENNSYLVANIA RAILROAD

OCTORARO WATER COMPANY

LOCATION

Main line of Pennsylvania R. R. from New York enters Pennsylvania where it crosses Delaware River at Trenton, following west bank of that stream to Philadelphia. It traverses Sections 3 and 12, in an easterly and westerly direction from Philadelphia, at practically sea level, following a northwesterly course through Delaware, Chester, Lancaster and Dauphin counties to Harrisburg, 105.3 miles, crossing from the Delaware into the Susquehanna drainage basin near Atglen, at elevation 512. From Harrisburg it follows east side of Susquehanna River 5.4 miles, crossing to the west side at Rockville, and fol-

lowing colsely the water's edge for 10.6 miles, when it turns westward to follow south bank of Juniata River. From elevation 317.4 at Harrisburg the road rises to 360 at mouth of Juniata River.

WATER SUPPLY

Main line from Philadelphia to Pittsburgh receives large part of its water supply from eight incorporated water companies controlled by Pennsylvania R. R. Co. forming separate systems of supply. In addition, the railroad purchases water from various other water companies along its route and owns pumping stations at different points.

After drought of 1904, Pennsylvania R. R. commissioned American Pipe Mfg. Co. of Philadelphia to obtain water supply charters for townships along railroad route and to start construction of storage reservoirs and supply systems. This company secured 65 charters and started construction in 1905. The attached table gives the names of 11 companies, their source of supply, part of route covered and the section number under which the system is described:

WATER COMPANIES SUPPLYING PENNSYLVANIA R. R. BETWEEN PHILADELPHIA AND PITTSBURGH

No.	Name	Section No.	Source of supply	Route supplied
1	Octoraro Water Co.,	12	Octoraro Creek,	From Atglen to Downingtown on main line, and Atglen to Shenk's Ferry on Low Grade freight line
2	Dauphin Consolidated Water Co.,	12	Susquehanna River, wells and Stony Creek,	From Dauphin on Northern Central to Harrisburg, and Enola
3	Nekoda Water Supply Co.,		(No works yet built),	Proposed supply, Wild Cat Creek to Bailey
4	Clearview Water Supply Co.,	11	Licking Creek,	Denholm to Narrows
5	Greenmount Water Supply Co.,		(No works yet built),	Proposed supply, Mill Creek to Longfellow
6	Trout Run Water Supply Co.,		(No works yet built),	Proposed supply, Huntingdon to Barree
7	The Tipton Water Co.,	10	Tipton and Loup runs,	East Tyrone to Altoona
8	Blair Gap Water Supply Co.,	10	Blair Gap Run, Bells Gap Run, Kettle Run and Riggles Gap Run	Altoona, Hollidaysburg, Mule Shoe and Kittanning Point
9	Summit Water Supply Co.,	18	Bear Rock and Beaver Dam runs, North Branch & South Fork Conemaugh River, Bottle Run	Gallitzin to Conemaugh
10	High Ridge Water Supply Co.,	18	Tub Mill Creek, Big and Little Sugar runs, Poplar Hull and Big Springs runs	New Florence to Latrobe and Blairsville
11	The Mountain Water Supply Co.,	19	Indian Creek,	So. West Br. So. Connellsville to Radebaugh; Radebaugh to Wilmerding, Main Line; to Thomson, Monongahela Div., Ornsby to Brownsville and Redstone Jct., So. West Br., Rainey to Wheeler, also New Haven

The three companies which are noted in the table as not operating, because works are not yet built, were formed by combinations of several companies.

Nekoda Water Supply Co., incorporated 1905 for Greenwood Township, Perry County, purchased the following companies:

Company	Inc.	Incorporated for
Acker Water Supply Co.,	1905	Howe Township, Perry County
Iroquois Water Supply Co.,	1905	Miller Township, Perry County
Marsh Run Water Supply Co.,	1905	Tuscarora Township, Perry County
Oliver Water Supply Co.,	1905	Oliver Township, Perry County
Wheatfield Water Supply Co.,	1905	Wheatfield Township, Perry County

Greenmount Water Supply Co., incorporated 1905 for Henderson Township, Huntingdon County, purchased the following companies:

Company	Inc.	Incorporated for
Arydale Water Supply Co.,	1905	Brady Township, Huntingdon County
Calvin Water Supply Co.,	1905	Union Township, Huntingdon County
Longfellow Water Supply Co.,	1905	Bratten Township, Mifflin County
Ryde Water Supply Co.,	1905	Wayne Township, Mifflin County
Strode Water Supply Co.,	1905	Granville Township, Mifflin County
Valley Point Water Supply Co.,	1905	Shirley Township, Huntingdon County

Trout Run Water Supply Co., incorporated 1905 for Logan Township, Huntingdon County, purchased the following companies:

Company	Inc.	Incorporated for
Barree Water Supply Co.,	1905	Porter Township, Huntingdon County
White Hall Water Supply Co.,	1905	Franklin Township, Huntingdon County
Union Water Supply Co. of Oneida Township,	1905	Oneida Township, Huntingdon County

The systems of the eight active companies noted in table are described in detail in sections in which the source of supply is located.

OCTORARO WATER COMPANY

The Octoraro Water Co. was incorporated 1903 by merger of following companies:

Company	Inc.	Incorporated for
Citizens Water Co. of West Sadsbury, Pa.,	1903	W. Sadsbury Township, Chester County
Peoples Water Co. of Sadsbury, Pa.,	1903	Sadsbury Township, Chester County
Providence Water Co.,	1903	Providence Township, Lancaster County
Conestoga Water Co.,	1903	Conestoga Township, Lancaster County
Colerain Water Co.,	1903	Colerain Township, Lancaster County
Caln Water Co.,	1903	Caln Township, Chester County
Lower Oxford Water Co.,	1903	Lower Oxford Township, Chester County

SOURCE AND COLLECTION

Two intakes in Octoraro Creek. One pumping station just below junction of creek with West Branch, on boundary line between Lancaster and Chester counties. Water pumped from 12-inch intake line through 12-inch force main 8 miles to pumping station on West Branch. Here 12-inch main is joined by 12-inch from West Branch pumping station, changing to a 16-inch, 2 miles northerly to Mars Hill reservoir, capacity 10,000,000 gallons, at elevation 730.

Pumping equipment at Octoraro Creek, two pumps operated by two Morgan-Smith water wheels, capacity 800,000 gallons and 400,000 gallons. Pumping equipment at West Branch station two 3,000,000 gallon steam driven Wetherill pumps. Watershed area 18 square miles.

DISTRIBUTION

By gravity through 24-inch main from Mars Hill reservoir easterly to Downingtown, Chester County, on main line of railroad, and through 10-inch main westerly along Low Grade freight line to 500,000 gallon reservoir just east of crossing over Pequea Creek. Distributing reservoirs supplied:

Location	Elevation (feet)	Capacity (gallons)
Low Grade Freight Line, Martic Twp., Lancaster County,	460	500,000
Low Grade Freight Line, Providence Twp., Lancaster County,	530	100,000
Low Grade Freight Line, Eden Twp., Lancaster County,	604.5	500,000
Atglen, Lancaster County,	649	2,000,000
West Bradford Twp., Chester County,	389.7	2,000,000
Parkesburg, Chester County,	653.24	5,000,000

CONSUMPTION

Supply entirely industrial to following places:

Section No.	Place	Estimated average daily consumption (gallons)
3	Downingtown yard,	30,000
3	Downingtown (4 track troughs),	300,000
3	Thorndale,	500,000
3	Parkesburg,	70,000
12	Atglen (4 track troughs),	561,500
12	Atglen (2 track troughs), A. & S. Branch,	225,000
12	Mars Hill,	------
12	"Q" Tower,	125,000
12	"SF" Tower,	325,000
	Total,	2,136,500

PINE GROVE BOROUGH AND CHERRYVILLE VILLAGE (PINEGROVE TWP.), SCHUYLKILL COUNTY

MUNICIPAL WATER WORKS

	Population 1910 census	Increase since 1900	Estimated 1915
Pine Grove,	1,552	268	1,825
Cherryville,			

LOCATION

Southwestern Schuylkill County, at junction of two main branches of Swatara Creek; on Philadelphia & Reading Ry.

INDUSTRIES

Coal mines near borough; two tanneries, brick yard, two shirt factories, electric light plant.

WATER SUPPLY

Municipal plant built in 1893.

SOURCE AND COLLECTION

Adams Run, tributary of Swatara Creek; 900,000 gallon intake reservoir 0.5 mile above mouth of creek and 2 miles north of borough; watershed area 1.4 square miles. Water soft.

DISTRIBUTION

By gravity; pressure about 90 pounds; 35 fire hydrants, 4-inch.

CONSUMPTION

About 1,836 persons supplied; 300 domestic and 7 industrial taps. Stated average daily consumption, 193,000 gallons, 60,000 industrial. No means of measurement.

QUARRYVILLE BOROUGH, LANCASTER COUNTY

QUARRYVILLE WATER COMPANY

Population 1910 census, 739; increase since 1900, 174. Estimated 1915, 1,000a

LOCATION

South central Lancaster County, at source of Beaver Creek, tributary of Pequea Creek; connected with Lancaster by Lancaster, Oxford & Southern R. R. (not operated) and Conestoga Traction Co.

INDUSTRIES

Two creameries and two steam grist mills, the latter not connected with mains.

WATER SUPPLY

Quarryville Water Co., incorporated 1894 for Quarryville Borough.

SOURCE AND COLLECTION

(1) Several springs near headwaters of West Branch of Octoraro Creek, at elevation 80 to 175 above lowest point of borough; water by gravity to 450,000 gallon reservoir, about 75 feet above lowest point of borough. Minimum daily flow of springs stated to be about 100,000 gallons. Watershed area 300 acres.

(2) When supply from springs falls short a pumping station and filter plant at McAllister dam, on spring run in northern part of borough, is used. A 360,000 gallon pump direct-connected to 10 hp. Lawrence vertical steam engine lifts water through 3-inch discharge to two 4,000 gallon settling basins at filter plant. Settling basins two 20,000 gallon cypress tubs, with 6-inch outlet to one mechanical filter unit, a cypress tub, capacity 240,000 gallons daily; water flows to a 10,000 gallon filtered water well, thence pumped directly into distributing system by 240,000 gallon pump. Water soft.

DISTRIBUTION

By gravity from springs and by pumping from filter plant through 1.6 miles 8-inch supply mains, and 2 miles distributing mains, 8-inch, 4-inch and 2-inch; pressures from 35 to 45 pounds; one fire hydrant.

CONSUMPTION

About 1,000 persons supplied; 200 taps. About 2,000 gallons daily supplied to Lancaster, Oxford & Southern R. R. (when operating). Average daily consumption 30,000 gallons, 90% domestic and 10% industrial; frequently measured by temporary weirs.

RAILROAD BOROUGH, YORK COUNTY

PRIVATE SUPPLY

Population 1910 census, 308; increase since 1900, 95. Estimated 1915, 350b

LOCATION

Southern York County, at headwaters of tributary of South Branch of Codorus Creek; on Northern Central Division of Pennsylvania R. R.

INDUSTRIES

Tannery (closed at present); furniture factory, dye and chemical works, creamery, level and grade works and egg box factory.

WATER SUPPLY

Private system owned by Edward Helb.

SOURCE AND COLLECTION

Springs rising near headwaters of small stream flowing through borough. Water collected and piped through 4-inch terra cotta tile to 100,000 gallon distributing reservoir and through 2-inch galvanized pipe to 4,000 gallon distributing reservoir.

DISTRIBUTION

By gravity through 0.9 mile 6-inch and 0.2 mile 2-inch mains; pressures 5 to 65 pounds; in case of fire, water from stream can be turned into mains; 15 fire hydrants, 4-inch.

CONSUMPTION

About 250 persons, furniture factory, chemical works, creamery, egg box factory and several minor industries supplied; 58 taps. Stated average daily consumption 11,000 gallons, 10,000 gallons industrial. No means of measurement.

INDUSTRIAL

Chemical works use water from south branch of Codorus Creek for condensing purposes.

RED LION BOROUGH, YORK COUNTY

RED LION WATER COMPANY

Population 1910 census, 2,092; increase since 1900, 755. Estimated 1915, 3,000a

LOCATION

South central York County, near headwaters of Muddy and Mill creeks, tributaries of Susquehanna River; on Western Maryland R. R., and connected with York by York Rys. (electric). Borough covers 200 acres at top of hill, elevation 900.

INDUSTRIES

Manufacturing; tobacco growing country; cigar factories and furniture factory.

WATER SUPPLY

Red Lion Water Co., incorporated 1893 for Red Lion Borough.

SOURCE AND COLLECTION

(1) Water from three springs called Kaltreider Springs and four wells, forming main supply, piped to 160,000 gallon receiving chamber just east. Spring No. 1, 3-inch delivery pipe; spring No. 2, 2-inch, and spring No. 3, 4-inch.

Watershed area 100 acres. Minimum flow stated to be 130,000 gallons daily. Water from four wells delivered to receiving chamber by 2-inch pipe from pumps. Well No. 1, 8-inch diameter and 250 feet deep; others 6-inch diameter, 52 feet deep.

Pumping station in valley 1,700 feet northeast of borough and 276 feet lower than distributing reservoir. Water pumped from wells into receiving chamber, thence by 432,000 gallon Deane duplex steam pump, 30 hp., through 4-inch force main 5,475 feet to two distributing reservoirs in highest part of borough; capacities, 50,000 and 450,000 gallons respectively. Water in reservoirs 276 feet above pumps and 125 feet above main residential section. A 288,000 gallon Snow Duplex pump held in reserve. Power generated by 30 hp. Broomall-Schmidt tubular boiler.

(2) Two springs, called Lentz Springs, used in drought, 1,800 feet southwest of borough and 125 feet lower than distributing reservoirs; spring No. 1, 3-inch delivery pipe and spring No. 2, 2½-inch delivery pipe. Water by gravity to 80,000 gallon receiving basin at pumping station, thence pumped through 3-inch main 1,700 feet to

distributing reservoir. Pumping equipment a 172,800 gallon Gardner steam pump 12 hp., and an 18 hp. vertical boiler. Watershed area 50 acres. Minimum daily flow stated to be 40,000 gallons.

(3) Water from four Neff Springs and three Downs Springs, just west of borough, delivered by gravity to 97,000 gallon receiving basin at Downs Springs thence by gravity through 6-inch line 100 feet long from smaller reservoir, 12-inch line 50 feet, reducing to 6-inch 150 feet long from larger reservoir, to distributing system. Supply mains 1 mile 4-inch and 0.3 mile 3-inch. Distributing mains as follows:

Size (inches),	6	4	3	2	Total
Length (miles),	0.8	2.1	0.8	0.3	4.0

Pressures 10 to 70 pounds; 27 fire hydrants, 4-inch.

CONSUMPTION

Three thousand persons supplied; 450 taps. Average daily consumption, measured by pump displacement, 100,000 gallons; 80% domestic and 20% industrial; 11 taps metered. Metered consumption 10,000 gallons daily, all industrial.

RHEEMS (WEST DONEGAL TWP.), LANCASTER COUNTY

RHEEMS WATER COMPANY

Estimated population, 150

LOCATION

Northwestern corner of Lancaster County, at headwaters of tributary of Donegal Creek, tributary of Big Chickies Creek; on Pennsylvania R. R., and connected with Lancaster by Conestoga traction line. Village comparatively level; elevation 430 above sea level.

INDUSTRIES

Quarries, carriage works, machine shop, and canning factory.

WATER SUPPLY

Rheems Water Co., incorporated 1906 for West Donegal Township. Works installed 1908.

SOURCE AND COLLECTION

Water pumped from No. 1 drilled well, 8-inch diameter, 360 feet deep, on hilltop 1 mile west of village, by 230,000 gallon Meyers deep well pump operated by 3 hp. gasoline engine, to 50,000 gallon reservoir nearby. No. 2 well, 12-inch, a few feet away from No. 1 well, pumped by 16-foot Aermotor wind wheel. Water soft.

DISTRIBUTION

By gravity through 4,350 feet 6-inch main to distributing system. Distributing mains 1.2 miles 6-inch and 4-inch pipe; pressures 40 to 45 pounds; one fire hydrant, 4-inch.

CONSUMPTION

About 125 persons supplied; 29 taps. Pennsylvania R. R., two industrial plants and several houses in Mt. Joy Township supplied. Stated average daily consumption 5,000 gallons, 10% industrial, determined by fall in reservoir.

ROWENNA (EAST DONEGAL TWP.), LANCASTER COUNTY

ROWENNA WATER COMPANY (THE)

Estimated population, 100a

LOCATION

Southwestern corner Lancaster County, on east bank of Susquehanna River; on Pennsylvania R. R. Range in elevation about 15 feet.

WATER SUPPLY

The Rowenna Water Co., incorporated 1893 for Rowenna Village.

SOURCE AND COLLECTION

Water pumped from artesian well 0.25 mile north of village, by wind mill or by 2 hp. gasoline engine and auxiliary pump to 23,500 gallon covered reservoir. Water medium hard.

DISTRIBUTION

By gravity through 400 feet 4-inch main, ¾-inch to 1½-inch laterals; pressure 10 to 40 pounds; no fire hydrants.

CONSUMPTION

About 80 persons supplied; 20 taps. Stated average daily consumption 400 gallons, all domestic. Water used entirely for cooking and drinking; cistern water used for other purposes.

RUTHERFORD STATION, DAUPHIN COUNTY

BEAVER CREEK WATER COMPANY

Estimated population, 200a

LOCATION

Southern Dauphin County, 5 miles east of Harrisburg; on Philadelphia & Reading Ry.

INDUSTRIES

Yards of the Philadelphia & Reading Ry.

WATER SUPPLY

Beaver Creek Water Co., incorporated 1900 for Swatara Township.

SOURCE AND COLLECTION

Intake on Beaver Creek, near Hummelstown; watershed area 30 square miles. Water pumped to 50,000 gallon sedimentation basin, flowing thence through slow sand gravity filters, two units, 320,000 gallons capacity each, into 8,000 gallon clear water basin, thence pumped into distributing systems. Pumping installation two 500,000 gallon compound duplex pumps, one 46 and one 43 hp. return tubular boilers.

DISTRIBUTION

Water pumped through 2.4 miles 8-inch mains; pressures 7 to 85 pounds.

CONSUMPTION

Average 502,000 gallons daily, maximum 520,000 gallons. All industrial, to railroad yards.

SCHAEFFERSTOWN VILLAGE (HEIDELBERG TWP.), LEBANON COUNTY

SCHAEFFERSTOWN WATER COMPANY
HEIDELBERG TOWNSHIP WATER COMPANY

Estimated 1915 population, 1,000b

LOCATION

Southeastern Lebanon County, at headwaters of Buffalo Spring Run.

INDUSTRIES

Cigar factory and collar and cuff factory.

WATER SUPPLY

(1) Schaefferstown Water Co., incorporated 1845 for Schaefferstown Village; new works built in 1832 but said to have been in operation previous to 1763, making it the oldest water supply in the State.

(2) Heidelberg Township Water Co., incorporated 1910 for Heidelberg Township.

SCHAEFFERSTOWN WATER COMPANY

SOURCE AND COLLECTION

Large spring on hillside 0.25 mile southeast of center of village; watershed area, 6 acres. Water medium hard.

DISTRIBUTION

By gravity through 800 feet of pipe to two troughs on Market Street, one at center of town and one 300 feet south. Capacity of each 700 gallons.

CONSUMPTION

Supply to 200 persons. No means of measuring consumption.

THE HEIDELBERG TOWNSHIP WATER COMPANY

SOURCE AND COLLECTION

Four springs at headwaters of Heidelberg Creek, tributary of Middle Creek, 1.5 miles east of village.

DISTRIBUTION

By gravity through 6-inch wooden pipe line 1.5 miles long with 3-inch laterals; pressure 35 pounds; 20 fire hydrants, 18 3-inch and 2 4-inch.

CONSUMPTION

Supply to 1,000 persons, including several families outside village; 65 taps. No means of measuring consumption; assuming 40 gallons per capita, would be 40,000 gallons.

SHIPPENSBURG BOROUGH, CUMBERLAND COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 3,457; increase since 1900, 229. Estimated 1915, 3,690

LOCATION

Extreme western Cumberland County, on Middle Spring Creek, tributary of Conodoguinet Creek; on Cumberland Valley, Philadelphia & Reading, and Western Maryland railroads.

INDUSTRIES

Seat of State Normal School; two clothing factories, knitting mill, two carriage factories, two furniture factories, door and sash mill, engine and pump works, milk condensing plant and a novelty plant.

WATER SUPPLY

Municipal plant, works built in 1886.

SOURCE AND COLLECTION

(1) Million gallon intake dam known as Cleversburg dam on Miles Burn Run, 4.5 miles southeast of borough. An 8-inch, reducing to 6-inch, gravity main 4.1 miles to 2,500 gallon distributing reservoir 0.5 mile west of borough in Franklin County. Watershed area 4 square miles.

(2) Intake dam known as Stony Point dam, 350,000 gallons capacity, 4.5 miles south of borough, in Franklin County. A 6-inch, reducing to 4-inch, gravity main 3.5 miles to 3,000,000 gallon distributing reservoir. Watershed area 2.3 square miles. Water soft.

DISTRIBUTION

By gravity; pressures 40 to 65 pounds. Distributing mains as follows:

Size (inches),	12	10	8	4	Total
Length (miles),	1.0	1.0	1.0	7.0	10.0
Per cent.,	10	10	10	70	100

CONSUMPTION

Supply to 3,590 persons in Shippensburg in "East End," Cleversburg Village, Normal School (Cumberland County) and "West End" (Franklin County), 1,410 persons; total 5,000 persons supplied; 1,200 taps, 12 metered. Stated average daily consumption 450,000 gallons, 85% domestic and 15% industrial. No means of measuring.

COST AND REVENUE

Total cost of works, $75,000; gross revenue, $10,500.

PROPOSED

Plans approved and permit issued for larger dam in Stony Point Basin and for laying 10-inch main thence to distributing reservoir.

SHREWSBURY BOROUGH, YORK COUNTY

MUNICIPAL WATER WORKS
PRIVATE SUPPLY

Population 1910 census, 598; increase since 1900, 44. Estimated 1915, 600a

LOCATION

Southern York County, 3.5 miles north of Maryland line, at headwaters of branch of Deer Creek; 1 mile east of Pennsylvania R. R., Northern Central Division.

INDUSTRIES

Farming community; furniture and sewing factory.

WATER SUPPLY

(1) Municipal water works purchased from Shrewsbury Water Co., incorporated 1891, having operated previously as a private supply.

(2) Private system owned by E. F. Rehmeyer installed in 1891.

MUNICIPAL WATER WORKS

SOURCE AND COLLECTION

Three springs in borough; water pumped directly into mains by two hydraulic rams working under fall of 15 feet; capacity 20,000 gallons per day. Water soft.

DISTRIBUTION

Pumped to system and 40,000 gallon equalizing standpipe 1,000 feet east of borough. Six-inch iron main through borough to standpipe. Distributing mains, wooden, as follows:

Size (inches),	10	8	6	4	Total
Length (miles),	0.3	0.1	1.1	0.9	2.4

Pressures 80 to 90 pounds; 17 fire hydrants, 4-inch.

CONSUMPTION

Seventy families, two hotels and two restaurants supplied. Stated average daily consumption 2,500 gallons, maximum 3,000, all domestic. No means of measuring.

PRIVATE SUPPLY OWNED BY E. F. REHMEYER

Water from two drilled wells pumped to 7,000 gallon reservoir 500 feet north of borough by windmill, with gasoline engine auxiliary.

Supply to 15 families. Consumption not known; assuming 30 gallons per capita, would be about 2,000 gallons per day.

SPRING GROVE BOROUGH AND LEHMAN VILLAGE (JACKSON TWP.), YORK COUNTY

PRIVATE SUPPLY

Spring Grove population 1910 census, 1,152; increase since 1900, 147. Estimated 1915, 1,300a

LOCATION

Southwestern York County, on west branch of Codorus Creek; on Western Maryland R. R. and Northern Central Division of Pennsylvania R. R.; connected with York and Hanover by York Rys. (electric).

INDUSTRIES

Glatfelter paper mills, cigar factories, knitting mills, ice and ice cream.

WATER SUPPLY

Private supply owned by W. L. Glatfelter.

SOURCE AND COLLECTION

West Branch of Codorus Creek and small brook tributary. Water by gravity to two sedimentation basins, capacities 40,000 and 180,000 gallons, thence through 4,000,000 gallon Warren filters to 30,000 gallon clear water basin, thence pumped to 500,000 gallon distributing reservoir by 1,500,000 gallon Snow pump, power furnished by 30 hp. motor and six boilers. Water medium hard.

DISTRIBUTION

By gravity; pressures 70 to 100 pounds; 1.4 miles supply and distributing mains; 20 fire hydrants, 3-inch.

CONSUMPTION

About 1,400 persons supplied; 250 taps. Stated average daily consumption 50,000 gallons, 90% domestic and 10% industrial. No means of measurement.

STEELTON BOROUGH, DAUPHIN COUNTY

MUNICIPAL WATER WORKS

Population 1910 census 14,246; increase since 1900, 2,160. Estimated 1915, 15,337x

LOCATION

Southern Dauphin County, on east bank of Susquehanna River, 3 miles below Harrisburg; on Pennsylvania R. R., Philadelphia & Reading Ry., and connected with Harrisburg and Middletown by electric railway. Considerable portion of built-up residential district on hill back from river. Elevations in district served 300 to 450.

INDUSTRIES

Industrial community, practically supported by Pennsylvania steel works, blast furnaces and coking plant, extending several miles along river front; brewery, quarry, cigar factory.

WATER SUPPLY

Municipal works built 1892 by Steelton Home Water Co., purchased by borough 1899 and enlarged 1908.

SOURCE AND COLLECTION

Susquehanna River, pumped. New intake installed and pumping station enlarged 1908. Concrete intake with screened inlet near shore of Hess Island opposite pumping plant at northerly limits of borough; top of intake covered 1 foot at low water. A 30-inch intake pipe 1,150 feet to 25,000 gallon pump well at pumping station. Centrifugal pumps deliver raw water through 1,500 feet 24-inch wood-stave pipe to 25,000 gallon settling basin at filter plant, where alum or lime solution is added as necessary; thence by gravity through three prefilters, 360 square feet surface each, filled with fine anthracite, to three slow sand filters, total area 18,900 square feet, capacity 3,000,000 gallons daily. Thence 24-inch wood-stave pipe 1,500 feet to 30,000 gallon filtered water basin at pumping station, from which water is pumped directly into mains by Heisler steam pump, excess backing up into 9,000,000 gallon regulating reservoir at east end of borough. During summer water pumped first to reservoir and distributed from there.

PUMPING INSTALLATION

Two 3,000,000 gallon Southwark Foundry and Machine Co., low duty centrifugal pumps, 12-inch suction, two high speed 50 hp. Reeves vertical compound condensing engines, one 3,000,000 gallon Heisler horizontal flywheel compound condensing high duty steam pump, two 1,500,000 gallon Deane direct acting compound condensing high duty steam pumps, one 175 hp. Coatesville return tubular boiler, two 100 hp. Wilson return tubular boilers. Pumping plant entirely in duplicate, one centrifugal pump, one Reeves engine and both Deane pumps being kept in reserve and tested weekly.

DISTRIBUTION

By pumping or by gravity; pressures 30 to 110 pounds. Distributing mains:

Size (inches),	12	10	8	6	4	Total
Length (miles),	5.1	3.4	0.85	6.8	0.85	17
Per cent.,	30	20	5	40	5	100

One hundred twenty-four fire hydrants, 5 and 8-inch, principally 5-inch.

CONSUMPTION

Entire population served; 1,800 taps, all metered. Average daily consumption, metered, 1,200,000 gallons, 300,000 for drinking and laboratory use by Pennsylvania Steel Co.

Meters first installed 1908; system now practically all metered. Before metering pumps were operated at full capacity, 3,000,000 gallons daily; since metering consumption has decreased to 1,200,000 gallons daily, thus effecting material saving in operation of the plant.

COST AND REVENUE

Total cost of works, $276,000; annual operating expenses, $20,200; gross revenue, $33,000.

STEWARTSTOWN BOROUGH, YORK COUNTY

STEWARTSTOWN WATER COMPANY

Population 1910 census, 674, increase since 1900, 101. Estimated 1915, 700b

LOCATION

Extreme southern York County 1.5 miles from Maryland line, at headwaters of branch of Deer Creek; connected with New Freedom, on Northern Central Division of Pennsylvania R. R. by branch line.

WATER SUPPLY

Stewartstown Water Co., incorporated in 1904 for Stewartstown Borough.

SOURCE AND COLLECTION

Water from drilled well in borough pumped to 50,000 gallon elevated steel tank, on high ground, at northern end of borough; pump operated by gasoline engine. Water medium hard.

DISTRIBUTION

By gravity; pressure 35 to 40 pounds; 25 fire hydrants.

CONSUMPTION

No data as to consumption or number of persons supplied.

STRASBURG BOROUGH, LANCASTER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 885; decrease since 1900, 31. Estimated 1915, 900.

LOCATION

Central Lancaster County, on divide between Pequea Creek and its tributary Little Beaver Creek; private railroad connects it with Pennsylvania R. R. at Leaman Place; Conestoga Traction line to Lancaster.

INDUSTRIES

Agricultural community; fishing tackle factory, waist factory, concrete tie support factory, coach works, machine shop.

WATER SUPPLY

Municipal works built in 1898.

SOURCE AND COLLECTION

Water from springs in Mine Ridge, 6 miles south of borough, collected into 150,000 gallon reservoir on mountainside. Water soft.

DISTRIBUTION

By gravity through 8-inch pipe; pressures 50 to 70 pounds; 33 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,000 persons, some outside borough; consumption 60,000 gallons daily. No means of measurement.

COST AND REVENUE

Total cost of works, $20,000; annual operating expenses, $400; gross revenue, $2,000.

PROPOSED

Borough has purchased 11 acres of woodland and springs thereon, on another watershed in Paradise Township about 1 mile northeast of present source of supply. These springs are now being developed and water collected into one basin. Will not be connected with present system for a year or two, unless additional supply becomes necessary.

TREMONT BOROUGH, SCHUYLKILL COUNTY

TREMONT WATER AND GAS COMPANY

Population 1910 census, 2,067; increase since 1900, 120. Estimated 1915, 2,500a

LOCATION

Southwestern Schuylkill County; on Good Spring Creek, tributary of Swatara Creek; on Philadelphia & Reading Ry. Elevations 750 to 780.

INDUSTRIES

Mining community; shirt and stocking factory.

WATER SUPPLY

Tremont Water and Gas Co., incorporated 1870 for Tremont.

SOURCE AND COLLECTION

(1) Three reservoirs on Poplar Run, tributary of Good Spring Creek, main source of supply; one 200,000 gallons capacity and two of smaller size 0.5 mile west of borough line, furnish entire supply from September to June; watershed area 813 acres. Water soft.

(2) A 2,500,000 gallon reservoir on Hollenbach Run, tributary of Good Spring Creek 0.5 mile west of borough line, auxiliary supply; watershed area 405 acres. Water medium hard.

(3) A 100,000 gallon reservoir on Tierney Run, tributary of Good Spring Creek, 0.5 mile above borough, auxiliary supply; watershed area 12 acres. Water soft.

DISTRIBUTION

By gravity from (1) and (2) through 6-inch main and by pumping from (3) to 6-inch main by pump operated by 4 hp. gasoline engine. Pressures 35 to 70 pounds. Distributing and supply mains as follows:

Size (inches),	6	4	3	Total
Length (miles),	1.9	1.0	.2	3.1

Eleven fire hydrants; 3, 4-inch and 8, 6-inch.

CONSUMPTION

About 700 persons supplied; 190 taps. Average daily consumption not known; assuming 40 gallons per capita, would be 28,000 gallons.

TRESSLER ORPHANS' HOME, PERRY COUNTY

PRIVATE SUPPLY

Population 1915, about 300a

LOCATION

At Loysville, near central Perry County, on small tributary of Shermans Creek; on Newport & Shermans Valley R. R.

WATER SUPPLY

Private system installed in 1904.

SOURCE AND COLLECTION

Water from 4 springs just north of Home collected into 25,000 gallon reservoir.

DISTRIBUTION

By gravity through 1.5 miles of 4-inch iron pipe; pressure about 50 pounds. Three fire hydrants.

CONSUMPTION

About 300 people supplied. No means of measuring consumption; assuming 50 gallons per capita, would be 15,000 gallons per day, all domestic.

WEST LEBANON TOWNSHIP, LEBANON COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,098; decrease since 1900, 42. Estimated 1915, 1,200a

LOCATION

First class township, central Lebanon County, near headwaters of Quittapahilla Creek, adjoining Lebanon on west; on Philadelphia & Reading Railway, Cornwall & Lebanon R. R. and Lebanon Traction line. Area 1 square mile. Range in elevation 27 feet.

INDUSTRIES

Lackawanna iron and steel works and Donaghmore iron and steel works.

WATER SUPPLY

Municipal works built 1906; only example of township ownership in State.

SOURCE AND COLLECTION

Water from five drilled wells in north end of township and from several springs pumped to 300,000 gallon distributing reservoir. Water soft. Pumping installation one 91 g. p. m. deep well pump operated by electric motor, one 180 g. p. m. triplex pump operated by oil engine.

DISTRIBUTION

By gravity; pressure 47 to 51 pounds. Distributing and supply mains as follows:

Size (inches),	10	8	6	4	2	Total
Length (miles),	0.2	0.6	1.1	1.0	0.1	3.0

Twenty-five fire hydrants, 4-inch.

CONSUMPTION

About 800 persons supplied; 108 taps. Domestic consumption not known; assuming 40 gallons per capita, would be 32,000 gallons daily. Industrial consumption, measured by two meters 46,000 gallons daily.

WEST END (LANCASTER TWP.), LANCASTER COUNTY

THE WEST END WATER COMPANY

Estimated population 1915, 300a

LOCATION

Central Lancaster County, west of Lancaster City, in valley of Little Conestoga Creek and connected to city by Conestoga traction line. Range in elevation about 45 feet. Suburban residential district.

WATER SUPPLY

West End Water Co., incorporated 1896 for Lancaster Township.

SOURCE AND COLLECTION

Supply purchased from municipal works of Lancaster. Water medium hard.

DISTRIBUTION

By gravity; pressures 30 to 50 pounds; distributing mains 2.0 miles 6-inch and 0.2 mile 4-inch; 11 fire hydrants.

CONSUMPTION

Three hundred persons supplied; 57 taps. Average daily consumption determined by meters, 13,800 gallons, all domestic. Entirely metered.

WRIGHTSVILLE BOROUGH, YORK COUNTY

WRIGHTSVILLE WATER SUPPLY COMPANY
(H. E. Ahrens and others)

Population 1910 census, 2,051; decrease since 1900, 125. Estimated 1915, 2,250

LOCATION

Eastern York County, along West bank of Susquehanna River, at mouth of Kreutz Creek; Northern Central Division of Pennsylvania R. R. and connected with York by York Rys. Range in elevation 80 feet.

INDUSTRIES

Three iron foundries, three cigar factories, hosiery mill and embroidery factory.

WATER SUPPLY

Wrightsville Water Supply Co., incorporated 1897 for Wrightsville Borough.

SOURCE AND COLLECTION

(1) Kreutz Creek, by pumping; intake in race of Wrightsville Light and Power Co. in extreme southeast corner of borough, on north bank of creek, 600 feet from Susquehanna River. A Gould centrifugal pump driven by 2 hp. turbine raises water to two settling basins, combined capacity 24,000 gallons; thence it flows through 144,000 gallon mechanical filter unit to 6,500 gallon clear water well underneath, thence pumped by Gould triplex pump operated by 7½ hp. turbine through 4-inch force main 150 feet into distributing system. Pumps operated by water power. This supply about 6 months in the year during periods of low flow.

(2) Tributary of Kreutz Creek from the south to deep gully in hillside. Concrete basin, 200,000 gallons, 1 mile south of borough, fed by a number of springs. Main supply.

DISTRIBUTION

From (2) by gravity through 3,000 feet of 10-inch main to distributing system. Distributing mains as follows:

Size (inches),	8	6	4	Total
Length (miles),	5.0	2.0	1.0	8.0

Pressures 45 to 75 pounds; 18 fire hydrants, 4-inch.

CONSUMPTION

About 800 persons supplied; 147 taps; 30 metered, 9 industrial. Average daily consumption, measured by weir and pump displacement, 25,000 gallons, 60% industrial. Metered consumption 9,000 gallons daily industrial and 3,000 domestic.

YORK CITY, NORTH AND WEST YORK BOROUGHS, YORK COUNTY

YORK WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915	Supplied
York City,	44,750	11,042	50,543x	50,500a
North York Borough,	1,902	717	2,300a	2,300a
West York Borough,	2,435	(Inc. 1904)	3,000a	3,000a
West Manchester Twp.,			2,500b	
Manchester Twp.,			1,600b	
Springettsbury Twp.,			1,700b	1,700a
Spring Garden Twp.,			2,500b	
Totals,			64,143b	57,500a

LOCATION

Central York County, on both sides of Codorus Creek; on the Pennsylvania R. R. and the Western Maryland R. R.; center of York Rys. system. Elevations range from 350 feet along creek to 450 feet in northwestern part of city.

INDUSTRIES

Brewery, cold storage plant, chemical works, gas works, Duebal Supply Co., electric light plant, cement works, bridge plant, carriage works, wagon gear works, automobile plant, agricultural implement works, planing mill, furniture factory, safe and lock plant, Standard chain works, shoe factory, textile mill, four paper plants and five miscellaneous industries.

WATER SUPPLY

York Water Co., incorporated 1816 for York; purchased rights and franchises of following companies:

Name	Inc.	Date of purchase	Incorporated for
Water Co. of Manchester Twp.,	1896	1897	Manchester Twp.
Water Co. of Spring Garden Twp.,	1896	1897	Spring Garden Twp.
Water Co. of West Manchester Twp.,	1896	1897	West Manchester Twp.
Meyersville Water Co.,	1890	1897	Springettsbury Twp.

The York Water Co. owns all of the stock of the Water Company of Springettsbury Township, incorporated 1906 for Springettsbury Township. Original works supplied by gravity from springs, built in 1816; first pumping plant, installed 1849, abandoned with completion of present plant in 1897.

SOURCE AND COLLECTION

Water pumped from intake on South Branch of Codorus Creek, 275 foot head, through 24-inch force main 2.2 miles to two sedimentation basins 1.5 miles from center of city at elevation 616, combined storage capacity 33,500,000 gallons; aerated by fountains at inlets of basins, thence flowing through 24-inch gravity main to 12 mechanical filter units, combined capacity 7,000,000 gallons daily; thence by gravity to 2,000,000 gallon filtered water basin, elevation 566. Pumping equipment two 5,000,000 gallon Worthington duplex pumps, one 8,000,000 gallon Snow cross-compound pump, two 250 hp. Zell water tube boilers, one 320 hp. Sterling water tube boiler. Watershed area about 100 square miles. Water soft.

DISTRIBUTION

By gravity through two 20-inch mains 0.5 mile to city line. Supply mains as follows:

Size (inches),	30	24	20	12	10	8	6	Total
Length (miles),	0.1	2.2	1.3	0.3	(	0.1	)	4.0

Distributing mains as follows:

Size (inches),	4	4	5	6	7	8	10	12	14	16	20	24	Total
Length (miles),	6.32	22.36	.45	28.01	.29	6.84	5.36	10.76	.90	.11	3.30	.11	84.81
Per cent.,	7	27	(	34	) (	8	)	6	13	(1	) (	4	) 100

Pressures 42 to 81 pounds; 358 fire hydrants (owned by city), 178 6-inch, remainder 4-inch and 5-inch.

CONSUMPTION

Supply to 57,000 people; 14,308 taps. Average daily consumption, measured by controllers on effluent pipes from filters, 3,700,000 gallons, maximum 5,210,000 and minimum 2,500,000 gallons; 1,590,000 industrial, 2,110,000 gallons domestic; 572 taps metered, measuring entire industrial consumption of 1,590,000 gallons.

INDUSTRIAL SUPPLIES

These industries, in addition to securing water from York Water Co., have private supplies:

Name	Source
A. B. Farquhar Co.,	Codorus Creek
Merchants Electric Light Co.,	Codorus Creek
York chemical works,	Codorus Creek
York cold storage plant,	Codorus Creek
York gas works,	Codorus Creek
York Safe and Lock Co.,	Boro. & Codorus Creek
Jacob Beitzel planing mill,	Poor House Run
New York Wire Cloth Co.,	Poor House Run
Jos. Black & Sons Co.,	Run in W. York Boro.
Martin carriage works,	Spring in W. York Boro.
Pennsylvania Furniture Co.,	Spring in W. York Boro.
Keystone Brewery,	Artesian wells
York Bridge Co.,	Wells

SECTION No. 13.

POTOMAC BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

SECTION No. 13.

POTOMAC RIVER BASIN.

GENERAL DESCRIPTION

LOCATION AND EXTENT

Central southern part of Pennsylvania on the Maryland line, south of the Upper and Lower Juniata and Lower Main Susquehanna Subbasins. The area is 1,570 square miles, 3.5% of that of the State, and is drained by tributaries of the Potomac River. It includes nearly all of Franklin County, a large part of Bedford, Fulton and Adams counties, and small portions of Cumberland and Somerset counties.

SURFACE CHARACTERISTICS

The western part of the section, which lies in the ranges of the Allegheny Mountains, contains parallel ridges running northeast and southwest. The eastern part includes the Cumberland Valley and the valley of Adams County, separated by the South Mountain range of hills. The most important streams are Wills, Licking, Conococheague, Marsh and Rock Creeks.

POPULATION

In 1910 the total population was 87,030, an increase of 5% since 1900. Density 55, varying from 27 in Bedford County to 86 in Franklin County; urban population 29%.

RESOURCES AND INDUSTRIES

Agriculture is the principal industry. There are some fire clay mines and works in the district, and small manufacturing plants in the larger boroughs.

WATER SUPPLY

Ample supply of water is available, obtained principally by impounding the water of streams of moderate size in reservoirs high enough to insure gravity distribution. The city of Cumberland, Maryland, obtains its supply in this manner, as does the borough of Waynesboro. Chambersburg, the largest borough in the section, em-

ploys the combined system, with a consumption of 2,500,000 gallons. Of the 12,530,000 gallons obtained from this section by public systems, 7,800,000 gallons are used by the city of Cumberland, leaving a balance of but 4,730,000 gallons actually consumed in the section, the bulk of which is used by Chambersburg and the railroads near the Potomac River.

The aggregate population served by water supply systems is slightly over 59,000, including 24,000 in the city of Cumberland.

Including Cumberland, 19 public supplies are reported, three municipally owned, with a total consumption of 2,650,000 gallons, or 21% of the total public use. No system supplies more than a single community. No private industrial supplies are reported, but the railroads consume more than 1,320,000 gallons per day, 34% of which is from public supplies. The heaviest user is the Baltimore & Ohio R. R. Co., which obtains 700,000 gallons per day from Wills Creek, in Bedford County.

The following tables give a summary of the water supplies in this section, both domestic and industrial, after which are detailed descriptions of the water supply systems arranged alphabetically according to places supplied:

OPERATING PUBLIC WATER SUPPLIES, SECTION NO 13

Place	County	Company	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Blue Ridge,	Franklin, Washington Twp.,	Blue Ridge W. S. Co.,	300	300						1	
Cashtown,	Adams, Franklin Twp.,	The Cashtown W. Co.,	200b	100						1	
Chambersburg,	Franklin,	Municipal,	13,000	13,000				1			
Cumberland,	Maryland (State of),	Evitts Creek W. Co.,		24,000	†						
Fayetteville,	Franklin, Greene Twp.,	Fayetteville W. Co.,	660	600						1	
Gettysburg,	Adams,	Gettysburg W. Co.,	4,500	4,000			1				
Greencastle,	Franklin,	Municipal,	2,019	1,700				1			
Hyndman,	Bedford,	The Hyndman W. Co.,	1,200	1,100			1				
Littlestown,	Adams,	Municipal,	1,656	800				1			
Loudon,	Franklin, Peters Twp.,	Private, Loudon W. Co. (unine.),	300								1
McConnellsburg,	Fulton,	McConnellsburg W. Co.,	600	600			1				
Mercersburg,	Franklin,	Mercersburg W. Co.,	1,500	1,300			1				
Mont Alto,	Franklin,	Private, Jerry Plank,	625	200					1		
Monterey,	Franklin, Washington Twp.,	Monterey W. Co.,	25	600*						1	
Pen Mar,	Franklin, Washington Twp.,	Rouzerville W. Co.,	25b	1,000*						1	
		Private, H. H. Meyers,		200*							1
Rouzerville,	Franklin, Washington Twp.,	Rouzerville W. Co.,	450b	400						1	
State Sanitarium for Tuberculosis	Franklin, Mt. Alto,	Private,	(1,400)	(1,400)							
Tomstown,	Franklin, Quincy Twp.,	Private,	150b	125							1
Waynesboro,	Franklin,	Waynesboro W. Co.,	9,000	9,000			1				

bEstimated by Water Supply Commission.
*Summer population.
†City in Maryland.

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 13—Continued

Place	County	Company	Supply: Source: Surface	Supply: Source: Ground	Supply: Source: Combined	Supply: Method: Gravity	Supply: Method: Pumped	Supply: Method: Combined	Consumption (average daily)[1]: Domestic (gals.)	Consumption (average daily)[1]: Industrial (gals.)	Consumption (average daily)[1]: Total (gals.)	Consumption (average daily)[1]: Per capita (gals.)
Blue Ridge,	Franklin, Washington Twp.,	Blue Ridge W. S. Co.,	---	1	---	---	1	---	10,500a	----------	10,500a	------
Cashtown,	Adams, Franklin Twp.,	The Cashtown W. Co.,	---	1	---	1	---	---	3,000b	----------	3,000b	------
Chambersburg,	Franklin,	Municipal,	1	---	---	---	---	1	1,900,000	600,000	2,500,000	146d
Cumberland,	Maryland (State of),	Evitts Creek W. Co.,	1	---	---	1	---	---	----------	----------	7,800,000	325t
Fayetteville,	Franklin, Greene Twp.,	Fayetteville W. Co.,	1	---	---	1	---	---	30,000a	----------	30,000a	------
Gettysburg,	Adams,	Gettysburg W. Co.,	---	---	1	---	1	---	320,000	80,000	400,000	100t
Greencastle,	Franklin,	Municipal,	---	1	---	1	---	---	80,000	45,000	125,000	74t
Hyndman,	Bedford,	The Hyndman W. Co.,	---	---	1	---	---	1	33,000b	7,200a	40,200b	------
Littlestown,	Adams,	Municipal,	---	1	---	---	1	---	24,000b	----------	24,000b	------
Loudon,	Franklin, Peters Twp.,	Private, Loudon W. Co. (unine.),	---	1	---	1	---	---	250a	750a	1,000a	------
McConnellsburg,	Fulton,	McConnellsburg W. Co.,	1	---	---	1	---	---	9,000a	1,000a	10,000a	------
Mercersburg,	Franklin,	Mercersburg W. Co.,	1	---	---	1	---	---	150,000a	----------	150,000a	------
Mont Alto,	Franklin,	Private, Jerry Plank,	1	---	---	1	---	---	19,600a	400a	20,000a	------
Monterey,	Franklin, Washington Twp.,	Monterey W. Co.,	---	1	---	---	1	---	15,000	----------	15,000	25t
Pen Mar,	Franklin, Washington Twp.,	Rouzerville W. Co.,	---	1	---	---	1	---	19,000a	----------	19,000a	------
		Private, H. H. Meyers,	---	1	---	---	1	---	7,500a	----------	7,500a	------
Rouzerville,	Franklin, Washington Twp.,	Rouzerville W. Co.,	---	1	---	---	---	1	16,000a	----------	16,000a	------
State Sanitarium for Tuberculosis	Franklin, Mt. Alto,	Private,	---	---	---	---	---	---	147,500	----------	147,500	105d
Tomstown,	Franklin, Quincy Twp.,	Private,	---	1	---	1	---	---	2,500b	----------	2,500b	------
Waynesboro,	Franklin,	Waynesboro W. Co.,	1	---	---	1	---	---	800,000a	400,000a	1,200,000a	------

aEstimated by water companies.
bEstimated by Water Supply Commission.
dDomestic.
tTotal.

RAILROAD WATER SUPPLY, SECTION NO. 13

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
PENNSYLVANIA				
Bedford Division				
Ashcom,	Spring,	Gravity,	13,500	
Fossilville,	Spring,	Gravity,	36,000	
State Line,	Creek,	Pumped,	68,000	
NORTHERN CENTRAL				
Baltimore Division				
Littlestown,	Well,	Pumped,	35,000	
CUMBERLAND VALLEY				
Chambersburg,	Municipal Works,			430,000
Mercersburg,	Mercersburg W. Co.,			100
Richmond,	Spring,	Gravity,	14,000	
Waynesboro,	Waynesboro W. Co.,			11,600
PHILADELPHIA & READING				
Harrisburg Division				
Gettysburg,	Municipal Works,			13,500
BALTIMORE & OHIO				
Hyndman,	Wills Creek,	Gravity and pumped	350,000	
Glencoe,	Wills Creek,	Gravity and pumped	150,000	
South Hampton,	Wills Creek,	Gravity,	200,000	
Totals,			866,500	455,200

BLUE RIDGE (WASHINGTON TWP.), FRANKLIN COUNTY

BLUE RIDGE WATER SUPPLY COMPANY

Estimated 1915 population, 300a

LOCATION

Southeastern corner of Franklin County, 0.5 mile west of county line on Maryland boundary line, near headwaters of Red Run, a tributary of East Branch of Little Antietam Creek; on Western Maryland R. R. High elevation in South Mountains. Summer resort for consumptives.

WATER SUPPLY

Blue Ridge Water Supply Co., incorporated 1906 for Washington Township, taking over works of private system built in 1905. Operates mainly in summer from June 1 to October 1.

SOURCE AND COLLECTION

Two artesian wells at summit of South Mountain, elevation 1,740, in Maryland, about 0.5 mile from boundary line; reported flow about 50,000 gallons daily. Water pumped to 150,000 gallon reservoir. Pumping equipment 86,400 gallon triplex pump, 50,000 gallon air compressor and boiler. Water medium hard.

DISTRIBUTION

By gravity through 3-inch main; pressures 100 to 110 pounds; 2 miles 2-inch and 3-inch distributing mains; no fire hydrants.

CONSUMPTION

Supply to 300 people; 35 metered taps, principally for summer cottages. Average daily consumption 10,500 gallons, in summer.

CASHTOWN (FRANKLIN TWP.), ADAMS COUNTY

THE CASHTOWN WATER COMPANY

Estimated 1915 population, 200b

LOCATION

Eastern Adams County, Franklin Township, at headwaters of two tributaries of Marsh Creek, about 3 miles north of Baltimore and Harrisburg Division of Western Maryland R. R. Farming district.

WATER SUPPLY

The Cashtown Water Co., incorporated 1894 for village of Cashtown.

SOURCE AND COLLECTION

Spring 0.5 mile west of village with 57,500 gallon reservoir around it; minimum flow 86,400 gallons daily. Water soft.

DISTRIBUTION

By gravity through 4-inch main; pressures 50 to 60 pounds; laterals 2-inch and 3-inch; 6 fire hydrants, 2-inch.

CONSUMPTION

Supply to 100 people; 30 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 3,000 gallons daily, all domestic.

CHAMBERSBURG BOROUGH, FRANKLIN COUNTY

MUNICIPAL WATER WORKS

Population 1910 census 11,800; increase since 1900, 2,936. Estimated 1915, 13,000a

LOCATION

County seat, in central Franklin County, along Conococheague Creek; on Cumberland Valley and Western Maryland railroads.

INDUSTRIES

In agricultural district; machine shops and foundry of Cumberland Valley R. R., hydraulic machinery works, milling machine works, hosiery mill, silk mill and woolen mill. Seat of Wilson College for girls.

WATER SUPPLY

Municipal works installed 1876.

SOURCE AND COLLECTION

(1) Birch Run, tributary of east branch of Conococheague Creek; intake dam at mouth of Hosack Creek, elevation 975, 10 miles from borough, in South Mountain and in Adams County. Minimum flow, reported by weir measurement, 2,500,000 daily; watershed area 18 square miles. An agreement with State Forestry Commission gives borough right to construct intake and lay pipe in Caledonia reservation. Fourteen-inch gravity main 7.5 miles to 2,200,000 gallon distributing reservoir, at elevation 801; 25,000 gallon standpipe nearby to take care of variations in flow. Water soft.

(2) Conococheague Creek, held for reserve; intake 2 miles north of borough. Water from dam flows to settling basin, from which it may be pumped by 2,000,000 Worthington pump directly into mains.

DISTRIBUTION

By gravity through 16-inch main from distributing reservoir, reducing to 12-inch, with connection in northwest corner of borough to 1,500,000 gallon equalizing reservoir; pressures 40 to 90 pounds. Distributing mains as follows:

Size (inches),	14	12	10	8	6	4	3 and less	Total
Length (miles),	0.5	0.4	1.4	2.0	4.6	11.4	1.8	22.1
Per cent.,	2	2	6	9	21	52	8	100

One hundred and forty-six fire hydrants.

CONSUMPTION

Supply to 13,000 people; 2,598 taps. Average consumption 2,500,000 gallons daily, 75% domestic and 25% industrial, measured by weir. Cumberland Valley R. R. uses 400,000 gallons daily, Western Maryland R. R. 30,000 gallons and Wilson College 60,000. There are 705 taps metered, 58 industrial; metered consumption 700,000 gallons daily industrial, 64,000 domestic.

COST AND REVENUE

Total cost of works, about $365,000; annual operating expenses (1913), $3,250; net revenue (1913), $29,192.

CUMBERLAND, MARYLAND

EVITTS CREEK WATER COMPANY (BEDFORD COUNTY)

Population 1910 census, 21,839; increase since 1900, 4,711. Estimated 1915, 24,000b

LOCATION

Northwestern part of Maryland, along both sides of Potomac River, at mouth of Wills Creek; on Baltimore & Ohio and Western Maryland railroads and on Bedford Division of Pennsylvania R. R.

WATER SUPPLY

Evitts Creek Water Co., incorporated 1911 for Cumberland Valley Township, Bedford County, Pennsylvania, by city of Cumberland, Maryland, to secure supply of pure water; owns all rights on stream and watershed above intake; works completed September, 1913.

SOURCE AND COLLECTION

Evitts Creek; dam impounding Lake Gordon, capacity 1,400,000,000 gallons, 2 miles above Maryland line, in Pennsylvania; watershed area 66 square miles. Filter plant, capacity 9,000,000 gallons daily, near dam.

DISTRIBUTION

By gravity through 9 miles 36-inch wood-stave pipe to 5,000,000 gallon distributing reservoir at Cumberland; pressures 117 to 125 pounds.

CONSUMPTION

Water used by one family in Pennsylvania, along line of pipe; connections for five more. Average consumption 7,800,000 gallons daily; maximum 8,800,000 gallons; measured by orifice plates.

FAYETTEVILLE (GREENE TWP.), FRANKLIN COUNTY

FAYETTEVILLE WATER COMPANY

Estimated 1915 population, 600a

LOCATION

Eastern Franklin County, on small tributary of Conococheague Creek; on Chambersburg & Gettysburg Electric Ry. Average elevation 810.

INDUSTRIES

Agriculture; overall factory.

WATER SUPPLY

Fayetteville Water Co., incorporated 1897 for Fayetteville.

SOURCE AND COLLECTION

Cold Spring Run, tributary of Conococheague Creek; intake dam 1.12 miles north of village, at elevation 980, diverts water into pool from which supply main leads to village. Watershed area 1,900 acres. Water soft.

DISTRIBUTION

By gravity through 10-inch main, reducing to 6-inch and 3-inch; pressure 87 pounds; 2.7 miles of delivery mains and 1.14 miles distributing mains, 3-inch and 4-inch; no fire hydrants.

CONSUMPTION

Supply to 600 people; 133 taps. Stated average consumption, 30,000 gallons daily, all domestic. No means of measurement.

GETTYSBURG BOROUGH, ADAMS COUNTY

GETTYSBURG WATER COMPANY

Population 1910 census, 4,030; increase since 1900, 535. Estimated 1915, 4,500a

LOCATION

Central Adams County, along Rock Creek, tributary of Monocacy River; on Western Maryland R. R., Gettysburg Electric Ry. and terminus of Gettysburg & Harrisburg Ry. Built-up portion on slightly rolling ground; range of elevations 100 feet.

INDUSTRIES

Agriculture; shirt factory, two planing mills, furniture factory, foundry and brick plant. Seat of Gettysburg College. Much of surrounding territory included in a national reservation.

WATER SUPPLY

Gettysburg Water Co., incorporated 1823 and given franchise by borough in 1846. Original source, wells supplemented by creek intake in 1894.

SOURCE AND COLLECTION

(1) Marsh Creek, by pumping; intake 3 miles southwest of borrough; watershed area 57 square miles. A 16-inch intake pipe from creek 450 feet to well at filters, where 1,000,000 gallon centrifugal pump, with one of same capacity in reserve, lifts water into two sedimentation basins, capacity 33,000 and 135,000 gallons. Water flows through mechanical filter, two 500,000 gallon units, to clear water basin, whence 1,000,000 gallon Laidlaw-Dunn-Gordon duplex pump, with one of same capacity in reserve, forces water directly into mains; 60 hp. high pressure boilers.

(2) Auxiliary supply from three drilled wells near equalizing reservoir, on Cemetery Hill. Two windmills pump into reservoir, while third pumps to 4,500 gallon wooden tank connected to distributing mains; capacity of pumps 432,000 gallons daily.

DISTRIBUTION

By pumping directly into mains connected with 1,000,000 gallon equalizing reservoir on Cemetery Hill. Delivery and distributing mains as follows:

Size (inches),	12	6	4	3	Total
Length (miles),	0.6	3.1	2.5	2.5	8.7

Forty-nine fire hydrants.

CONSUMPTION

Supply to 4,000 people; 800 taps. Average consumption 400,000 gallons daily; 80% domestic and 20% industrial, measured by pump displacement. There are 75 taps metered, 65 industrial. Supply to college and almshouse 14,000 gallons daily, and to Philadelphia & Reading and Western Maryland railroads, 400,000 gallons daily.

GREENCASTLE BOROUGH, FRANKLIN COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,919; increase since 1900, 456. Estimated 1915, 2,019

LOCATION

Central southern Franklin County, in valley of Conococheague Creek; on Cumberland Valley R. R. and Chambersburg, Greencastle & Waynesboro Ry. 4.5 miles north of Maryland line. Range in elevation 40 feet.

INDUSTRIES

Agriculture; gasoline engine works and hosiery mill.

WATER SUPPLY

Municipal works purchased 1910 from Greencastle Water Co., incorporated 1893 as Consumers Water Co. of Greencastle; name changed 1897 after receivers' sale.

SOURCE AND COLLECTION

Three springs, in limestone formation 2 miles east of borough. Water from Eshleman Spring collected through 8-inch main with 6-inch branches to Spangler (A) and (B) springs, piped to 15,000,000 gallon storage reservoir 166 feet above low portion of district supplied and delivered to borough by gravity through 2 miles of 8-inch supply main. Reported flow of springs 300,000 gallons daily, maximum 500,000; decreasing very much in dry seasons. Water medium hard.

DISTRIBUTION

By gravity; pressures 62 to 82 pounds. Distributing mains:

Size (inches),	4	6	8	Total
Length (miles),	2.0	1.3	0.4	3.7

Three fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,700 persons; 385 taps. Stated average daily consumption 125,000 gallons, measured by fall of water in reservoir; 65% domestic.

COST AND REVENUE

Total cost of works, $71,000; annual operating expenses, $350; gross revenue, $4,270.

HYNDMAN BOROUGH, BEDFORD COUNTY

THE HYNDMAN WATER COMPANY

Population 1910 census, 1,164; decrease since 1900, 78. Estimated 1915, 1,200a

LOCATION

Southeastern Bedford County, in valley of Wills Creek, just below mouth of Little Wills Creek; on Bedford Division of Pennsylvania R. R. and Pittsburgh Division of Baltimore & Ohio R. R. Surface of built-up portion level; elevation 941; flanked by Wills and Little Savage mountains.

INDUSTRIES

Repair shops and yards of Baltimore & Ohio R. R.; fire brick plant and lime and ballast works.

WATER SUPPLY

The Hyndman Water Co., incorporated 1891 for Hyndman borough.

SOURCE AND COLLECTION

(1) Laurel Run, tributary of Little Wills Creek; 850,000-gallon impounding reservoir 1 mile northeast of borough; watershed area 800 acres. Elevation of spillway 217 feet above center of borough. An intake 150 feet above, capacity 75,000 gallons, has spillway at same elevation as reservoir. Water soft.

(2) Auxiliary supply from 6-inch drilled well 200 feet deep, in white sand formation, just south of storage reservoir dam; capacity 21,600 gallons daily. Pumped by 108,000 gallon American deep well pump, belt-connected to 5 hp. Fairbanks gasoline engine; 4-inch discharge pipe 40 feet to reservoir.

(3) Emergency intake in Little Wills Creek, 700 feet north of borough, where main pipe line crosses stream; watershed area 45 square miles. Canton duplex steam pump, capacity 260,000 gallons daily, delivers water through 3-inch discharge connected to 8-inch gravity main from reservoir.

DISTRIBUTION

By gravity through 10-inch main from intake 2,900 feet, joined by 6-inch main from storage reservoir, reducing to 8-inch, 600 feet to Little Wills Creek at emergency pumping station, thence 1,200 feet to distributing system in northeastern part of borough; pressures 75 to 120 pounds. Distributing mains as follows:

Size (inches),	8	6	4	2	Total
Length (miles),	0.3	0.8	1.6	0.8	3.5

Twenty-eight fire hydrants, 6-inch.

CONSUMPTION

Supply to 1,100 people; 291 taps. Stated consumption 18,000 gallons daily, 60% domestic and 40% industrial. No means of measurement.

LITTLESTOWN BOROUGH, ADAMS COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,347; increase since 1900, 229. Estimated 1915, 1,650a

LOCATION

Southeastern Adams County, near headwaters of Piney and Alloway Creeks, tributaries of Monocacy River; on Frederick Branch of Northern Central R. R. and Hanover & McSherrystown street railway.

INDUSTRIES

Agriculture; canning factory, silk mill, planing mill and cigar factory.

WATER SUPPLY

Municipal plant installed in 1898.

SOURCE AND COLLECTION

Dug well in southeastern part of borough; water pumped through 6-inch force main by 288,000 gallon pump to 107,000 gallon standpipe, 0.12 mile west.

DISTRIBUTION

By gravity through 8-inch, reducing to 6-inch and 4-inch mains; pressure 65 pounds.

CONSUMPTION

Supply to 800 people. No means of measuring consumption; assuming 30 gallons per capita, would be 24,000 gallons daily, all domestic.

LOUDON (PETERS TWP.), FRANKLIN COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 300a

LOCATION

Western Franklin County, Peters Township on West Branch of Conococheague Creek; on branch of Cumberland Valley R. R.

INDUSTRIES

Agriculture; hosiery mill, creamery, planing mill, flour and grist mill.

WATER SUPPLY

Loudon Water Co., unincorporated; works installed 1828.

SOURCE AND COLLECTION

Large spring 0.75 mile west of village in 600 gallon reservoir. Water medium hard.

DISTRIBUTION

By gravity through 2-inch pipe.

CONSUMPTION

Stated consumption 1,000 gallons daily, 25% domestic and 75% industrial. No means of measurement.

McCONNELLSBURG BOROUGH, FULTON COUNTY

McCONNELLSBURG WATER COMPANY

Population 1910 census, 579; increase since 1900, 3. Estimated 1915, 600a

LOCATION

County seat, eastern Fulton County, near headwaters of Big Cove Creek, tributary of Licking Creek.

INDUSTRIES

Agriculture; tannery, planing mill, sash and door factory.

WATER SUPPLY

McConnellsburg Water Co., incorporated 1900 for McConnellsburg and vicinity.

SOURCE AND COLLECTION

Mountain spring run formed by three smaller runs; intake 1 mile east of borough; watershed area 12 acres. A 12-inch main takes water to 500,000 gallon reservoir. Water soft.

DISTRIBUTION

By gravity through 6-inch main 1 mile long; pressures 70 to 90 pounds; distributing mains 1.5 miles 3-inch to 6-inch; 12 fire hydrants.

CONSUMPTION

Supply to 600 people; 150 taps. Stated consumption 10,000 galsons daily, 90% domestic and 10% industrial. No means of measurement.

MERCERSBURG BOROUGH, FRANKLIN COUNTY

MERCERSBURG WATER COMPANY

Population 1910 census, 1,410; incease since 1900, 454. Estimated 1915, 1,500a

LOCATION

Northwestern Franklin County, on tributary of West Branch of Conococheague Creek; on terminus of branch of Cumberland Valley R. R. Range of elevations in built-up section 550 to 600 feet.

INDUSTRIES

Agriculture; tannery and planing mill. Seat of Mercersburg Academy, having 400 students.

WATER SUPPLY

Mercersburg Water Co., incorporated 1902 for Mercersburg Borough; works built in 1904.

SOURCE AND COLLECTION

Buck Run, tributary of West Branch of Conococheague Creek; storage reservoir, capacity 6,000,000 gallons, 4 miles northwest of borough; watershed area 2.87 square miles; elevation of spillway 1,000. A 16-inch pipe through dam discharges into creek, where an intake just below diverts water through 10-inch, reducing to 8-inch, pipe to 200,000 gallon distributing reservoir 1 mile southeast of intake, at Charlestown village, elevation 750. Water soft.

DISTRIBUTION

By gravity through 6-inch main; pressures 60 to 90 pounds. About 3.9 miles delivery mains, 10-inch to 6-inch; about 3.5 miles distributing mains, 6-inch to 1-inch, 65% 4-inch; 27 fire hydrants.

CONSUMPTION

Supply to 1,300 people; 300 taps. Stated average daily consumption 150,000 gallons, nearly all domestic; 18 taps along pipe line in villages of Folz and Charlestown, combined population 200.

MONT ALTO, FRANKLIN COUNTY

PRIVATE SUPPLIES

Estimated 1915 population, 625 (incorporated 1913)

LOCATION

Southeastern Franklin County, near headwaters of west branch of Little Antietam Creek; on Waynesboro Branch of Cumberland Valley R. R. Range of elevation in built-up portion 100 feet.

INDUSTRIES

Agriculture; evaporating plant. Pennsylvania State Sanatorium for Tuberculosis No. 1 situated on South Mountain and eastern boundary line of county, near borough. Elevation 1,550 to 1,650.

WATER SUPPLY

Private system of Jerry Plank, of Gettysburg.

Private system of State Sanatorium installed 1908; extensions made in 1910 and 1912.

PRIVATE SYSTEM OF JERRY PLANK, OF GETTYSBURG

SOURCE AND COLLECTION

West branch of Little Antietam Creek; intake 1 mile east of borough near Forestry Academy. Water collected in well having supply main to village. Water medium hard.

DISTRIBUTION

By gravity through .33 mile of 3-inch, reducing to 1 mile of 2-inch; laterals 1-inch. No fire hydrants.

CONSUMPTION

Supply to 200 people; 45 taps. Stated consumption 20,000 gallons daily, 98% domestic and 2% industrial. No means of measurement.

PROPOSED SUPPLY

Municipal supply from springs on State Forest land to be installed. Present supply polluted by Mont Alto Consumptive Sanatorium and Cumberland Valley Railroad Park, just above intake.

PRIVATE SYSTEM OF PENNSYLVANIA STATE SANATORIUM

SOURCE AND COLLECTION

(1) Seven springs on hillside southwest of buildings. Water collected by 2-inch, 3-inch and 4-inch pipes to 42,000 gallon reservoir at pumping station on western border of main camp; pumped to system by two 100,000 gallon triplex pumps operated by gasoline engines. Reported flow during droughts approximately 45,000 gallons daily. Water medium hard.

(2) West branch of Little Antietam Creek; intake dam at foot of mountain near Mont Alto park; watershed area 3.6 square miles. Three large springs form source of stream, one of which supplies State Forestry Academy through pipe line having inlet in spring basin. Water pumped from intake through 6-inch force main 8,500 feet to 300,000 gallon concrete storage reservoir on southern border of sanatorium property at elevation 1,685, and to 285,000 gallon steel storage reservoir on hill back of hospital, on western border of sanatorium property at elevation 1,750. Pumping equipment two 150,000 gallon triplex pumps connected to gasoline engines. Water medium hard.

(3) Rothrock and Carbaugh springs; pumping station maintained for emergency supply; abandoned as ordinary supply because of small dry weather flow.

DISTRIBUTION

From (1) by pumping direct to system through 16-inch main.

From (2) by gravity through 6-inch main. Pressures 60 to 250 pounds; distributing mains, 6,000 feet 2-inch, 3-inch and 6-inch; 10 fire hydrants, 6-inch.

CONSUMPTION

Supply to 1,400 people. Average daily consumption 147,500 gallons, all domestic, measured by pump displacement.

MONTEREY (WASHINGTON TWP.), FRANKLIN COUNTY

MONTEREY WATER COMPANY

Estimated population, 25 winter, 600 summer

LOCATION

Extreme southeastern corner of Franklin County, near headwaters of Bliney branch of Toms Creek; on western Maryland R. R. Summer resort.

WATER SUPPLY

Monterey Water Co., incorporated 1895.

SOURCE AND COLLECTION

Three drilled wells, 105, 119 and 120 feet deep, in village; water pumped to 20,000 gallon wooden tank on iron frame work 60 feet high. Pumping equipment 10 hp. steam pump, 25,000 gallon pump, 33,000 gallon pump, 10 hp. gasoline engine, 10 hp. and 20 hp. boilers. An 80,000 gallon concrete reservoir used for storage. Water soft.

DISTRIBUTION

By gravity to hotels and cottages.

CONSUMPTION

System operated from May to November. Supplies 600 people through 55 taps (6 metered), in July and August, decreasing to 25

people remainder of season. Average consumption 15,000 gallons daily; maximum 30,000 gallons, minimum 100 gallons, measured by pump displacement.

PEN MAR (WASHINGTON TWP.), FRANKLIN COUNTY

PRIVATE SUPPLY

ROUZERVILLE WATER COMPANY

Estimated population, 25b

LOCATION

Southeastern corner of Franklin County, on Maryland line 3 miles west of Adams County line; on South Mountain, near Falls Creek, tributary of Red Run, tributary of East Branch of Little Antietam Creek; on Western Maryland R. R. and connected with Waynesboro by Chambersburg, Greencastle & Waynesboro Electric Ry.

Summer resort; population increased to 1,000 in season.

WATER SUPPLY

Private system of H. H. Meyers, and Rouzerville Water Co. (partial description under Rouzerville).

H. H. MEYERS SYSTEM

SOURCE AND COLLECTION

Spring at Mountain Lake cottage, 0.75 mile northwest of village; reported flow 16,000 gallons daily. Water pumped by water power to 3,300 gallon reservoir. Installation 16-feet by 20-inch water wheel on Cascade Stream, rated capacity 6 hp. under head of 12 feet. Water distributed by gravity.

CONSUMPTION

Supplies two hotels and eight houses; operates from May to October. Average daily consumption 7,500 gallons.

ROUZERVILLE WATER COMPANY

SOURCE AND COLLECTION

Springs at foot of mountain 1 mile north of Pen Mar. Two Gould triplex pumps operated by water power lift water through 1 mile of

2-inch force main to 156,000 gallon reservoir in Pen Mar, 480 feet above springs.

DISTRIBUTION

By gravity through 6,800 feet of 1-inch and 500 feet of 2-inch pipe.

CONSUMPTION

Supplies 100 to 1,000 people through 57 taps at cottages; operated only from May to October. Average daily consumption 19,000 gallons, all domestic.

ROUZERVILLE VILLAGE (WASHINGTON TWP.), FRANKLIN COUNTY

ROUZERVILLE WATER COMPANY

Estimated 1915 population, 450b

LOCATION

Southeastern corner of Franklin County, near Red Run, tributary of East Branch of Little Antietam Creek; on Chambersburg, Greencastle & Waynesboro Electric Ry. Agricultural district.

WATER SUPPLY

Rouzerville Water Co., incorporated 1898; partial supply also to Pen Mar, described under Pen Mar Village.

SOURCE AND COLLECTION

Springs at foot of mountain, 1 mile east and 90 feet above village; reported flow 50,000 gallons daily. Pumping equipment used only in summer to supply reservoir at Pen Mar, 1 mile south of springs and 480 feet above.

DISTRIBUTION

By gravity through 5,800 feet of 4-inch main; 2.2 miles distributing mains, 1-inch to 4-inch.

CONSUMPTION

Supply to 400 people; 106 taps. Stated average daily consumption 16,000 gallons, all domestic; increased to 35,000 gallons in summer by supply to Pen Mar.

TOMSTOWN (QUINCY TWP.), FRANKLIN COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 150b

LOCATION

Southeastern Franklin County, in valley of West Branch of Little Antietam Creek; 1 mile southeast of Quincy Station on Waynesboro Branch of Cumberland Valley R. R. Agricultural section.

WATER SUPPLY

Private system installed about 1845. Source of supply, spring 0.25 mile north of village. Water piped to 400 gallon trough in village square.

About 25 families carry water from trough. Average daily consumption probably 2,500 gallons, all domestic.

WAYNESBORO BOROUGH, FRANKLIN COUNTY

THE WAYNESBORO WATER COMPANY

Population 1910 census, 7,199; increase since 1900, 1,803. Estimated 1915, 9,000a

LOCATION

Southern Franklin County, on divide between east and west branches of Little Antietam Creek; on Western Maryland and Cumberland Valley railroads and Chambersburg, Greencastle & Waynesboro Electric Ry. Range of elevations in built-up portion about 100 feet.

INDUSTRIES

Agriculture; machine works, tool works, vise works, overall factory, creamery, distilling plant, plaster works, metal foundry, cement stone works, electric self-winding clock factory, grain separator and ice machine plant.

WATER SUPPLY

The Waynesboro Water Co., incorporated 1882 for Waynesboro Borough.

SOURCE AND COLLECTION

(1) Rattlesnake Creek, tributary of East Branch of Little Antietam Creek; intake 6 miles northeast of borough at mouth; watershed area 10 square miles.

(2) Baileys Run, tributary of East Branch of Little Antietam Creek; storage reservoir, capacity 1,000,000 gallons, 4 miles east of borough and 0.75 mile below source in a large spring; watershed area 0.9 square miles. Water soft.

DISTRIBUTION

By gravity through 10-inch and 12-inch mains to distributing system; surplus water backs up into 1,500,000 gallon equalizing reservoir, in northeast corner of borough. Pressures 50 to 70 pounds. Distribution mains as follows:

Size (inches),	14	12	10	8	6	4	3 and less	Total
Length (miles),	0.2	0.2	0.2	2.0	7.0	5.0	7.5	22.1
Per cent.,	2	2	2	5	32	23	34	100

Forty-nine fire hydrants, nearly all 4-inch.

CONSUMPTION

Supply to 9,000 people; 2,025 taps, 16 industrial and metered. Stated consumption 1,200,000 gallons daily, 67% domestic and 33% industrial. No means of measurement.

SECTION No. 14.

GENESEE BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

SECTION No. 14.

GENESEE RIVER BASIN

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section is on the northern line of Pennsylvania, east of the Upper Allegheny and west of the Upper North Branch sub-basins. The area, 96 square miles, is drained by headwaters of Genesee River, and comprises a small portion of northern part of Potter County.

SURFACE CHARACTERISTICS

Steep hills, rising 400 to 500 feet above river.

POPULATION

In 1910 the total population was 2,921, a decrease of 11% since 1900. The density was 30 per square mile, with no urban population.

RESOURCES AND INDUSTRIES

Agriculture, brick plant, tannery and grist mills.

WATER SUPPLY

A population of 900 is supplied by two water companies, one of which serves two villages. The total consumption 53,000 gallons per day, all of it ground water. No private industrial supplies are reported.

The following tables give a summary of the water supplies in this section, both domestic and industrial, after which are detailed descriptions of the water supply systems arranged alphabetically according to places supplied:

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 14

Place	County	Company	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Genesee,	Potter, Genesee Twp.,	Genesee Citizens W. Co.,	600	400	------	------	------	------	------	1	------
Hickox,	Potter, Genesee Twp.,										
Lewisville,	Potter,	Lewisville W. Co.,	580	500	------	------	1	------	------	------	------

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 14—Continued

Place	County	Company	Supply						Consumption (average daily)			
			Source			Method						
			Surface	Ground	Combined	Gravity	Pumped	Combined	Domestic (gals.)	Industrial (gals.)	Total (gals.)	Per capita (gals.)
Genesee,	Potter, Genesee Twp.,	Genesee Citizens W. Co.,	---	1	---	1	---	---	13,000a	----------	13,000a	------
Hickox,	Potter, Genesee Twp.,											
Lewisville,	Potter,	Lewisville W. Co.,	---	1	---	---	---	1	36,000a	4,000a	40,000a	------

aEstimated by water companies

RAILROAD WATER SUPLIES, SECTION NO. 14

NEW YORK CENTRAL AND HUDSON RIVER

Station	Source of Supply	Method of supply	Average daily consumption	
			R. R.	Public
Pennsylvania Div'n Ulysses,	Lewisville Water Co.,			25,000

BUFFALO AND SUSQUEHANNA

Pusher Siding,	Creek, Spring,	Gravity, Gravity,	40,000	

COUDERSPORT AND PORT ALLEGANY

Gold,	(30,000 gal. tank),			
Totals,			40,000	25,000

GENESEE AND HICKOX VILLAGES (GENESEE TWP.), POTTER COUNTY

GENESEE CITIZENS WATER COMPANY

Estimated 1915 population, 600a

LOCATION

Northern Potter County, about 1 mile apart and just south of New York State line, on Genesee River; on Buffalo & Susquehanna R. R. and New York & Pennsylvania R. R. Built-up portion in valley between steep hills rising 400 to 500 feet above river.

INDUSTRIES

Agriculture; chemical plant.

WATER SUPPLY

Genesee Citizens Water Co., incorporated 1906 for Genesee Township.

SOURCE AND COLLECTION

(1) Three springs about 0.33 mile east of Hickox and 1.25 miles southeast of Genesee; water collected in 36,000 gallon reservoir, 123 feet above village; reported minimum flow 15,000 gallons daily. Water soft.

(2) Large spring 0.25 mile east of Genesee; water collected in 36,000 gallon reservoir 189 feet above village; reported minimum flow 7,000 gallons daily.

DISTRIBUTION

From (1) by gravity through 6-inch main, reducing to 4-inch, 300 feet to Genesee. Reservoir equalizes difference in elevation of two sources. Pressures 45 pounds. This source used for ordinary domestic service.

From (2) by gravity through 4-inch main; used for fire protection. Pressure 75 pounds; 11 fire hydrants, 7-inch; 2 miles distributing mains mostly 4-inch. Both supply sources connected into one system.

CONSUMPTION

Supply to 400 people; 75 taps. Stated average consumption, 13,000 gallons daily, all domestic. No means of measurement.

INDUSTRIAL SUPPLY

Genesee Chemical Co. has private system.

LEWISVILLE BOROUGH, POTTER COUNTY

LEWISVILLE WATER COMPANY

Population 1910 census, 579; decrease since 1900, 40. Estimated 1915, 580a

LOCATION

Northern Potter County; known as Ulysses P. O.; at headwaters of Genesee River; on New York Central R. R. and Coudersport & Port Allegany R. R.

INDUSTRIES

Agriculture; two grist mills.

WATER SUPPLY

Lewisville Water Co., incorporated 1887 for Lewisville Borough.

SOURCE AND COLLECTION

(1) Principal supply large spring in 800,000 gallon reservoir, 0.5 mile southeast of center of borough. Water soft.

(2) Auxiliary pumping station at large spring in 300,000 gallon reservoir near railroad station in central part of borough. A 38,000 gallon triplex pump connected to 14 hp. gas engine pumps water through 2-inch, increasing to 3-inch, force main to 30,000 gallon reservoir on hill in eastern part of borough; used principally for fire purposes.

DISTRIBUTION

From (1) by gravity through 4-inch main 1,075 feet long; pressures 30 to 60 pounds.

From (2) by gravity through 3-inch main 850 feet long for fire protection; supplies a few houses at high elevation; pressure 35 pounds.

Distributing mains, about 3.8 miles, 2-inch and 3-inch; 15 fire hydrants.

CONSUMPTION

Supply to 500 people; 145 taps. Stated average daily consumption 40,000 gallons, 90% domestic and 10% industrial. No means of measuring. Supplies New York Central R. R. and Coudersport & Port Allegany R. R.

SECTION No. 15.

ERIE BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

SECTION No. 15.

LAKE ERIE BASIN.

GENERAL DESCRIPTION

LOCATION AND EXTENT

This is a small section along Lake Erie in the extreme northwest corner of the State, 512 square miles in area, drained by Elk, Conneaut and several smaller creeks into the lake. It includes about half of Erie County and a small portion of Crawford County.

SURFACE CHARACTERISTICS

A comparatively level plain sloping down to the lake in a series of terraces. The creeks are generally sluggish and winding, with swampy areas, but some of them have cut steep gorges in the plain. This area is all north of the terminal moraine.

POPULATION

The population in 1910 was 98,300, an increase of 22% since 1900, the density being 192 per square mile. About 70% of the population is urban, most of it in the city of Erie, the population of which, in 1915, is estimated at 73,798.

RESOURCES AND INDUSTRIES

The principal industry, outside of many diversified manufactories in Erie, is agriculture, with considerable fruit growing, while there are numerous clay and flagstone quarries. Erie is an important lake port, having extensive shipping interests and steel works.

WATER SUPPLY

Erie gets its water from Lake Erie, the streams being not well suited to water supply purposes, but there is ample ground water, and the proximity of the lake renders danger of shortage impossible.

Four of the eleven boroughs are supplied, all by municipally owned plants, as is also the city of Erie.

Erie's average daily consumption is 16,800,000 gallons, while the total consumption from public systems in the district is over 17,300,000 gallons per day. The aggregate population served by water sup-

ply systems is about 86,000. There are no unincorporated villages supplied by water works. Eight sub-basins use less water for all purposes than the Erie basin, the total aggregate being 18,400,000 gallons, but it ranks seventh in amount used per square mile of area.

The following tables give a summary of the water supplies in this section, both domestic and industrial, after which are detailed descriptions of the water supply systems arranged alphabetically according to places supplied:

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 15

Place	County	Company	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Albion,	Erie,	Municipal,	2,000	1,500	------	------	------	1	------	------	------
Conneautville,	Crawford,	Municipal,	1,000	850	------	------	------	1	------	------	------
Erie,	Erie,	Municipal,	73,798x	80,000	------	1	------	------	------	------	------
Girard,	Erie,	Municipal,	1,200b	660	------	------	------	1	------	------	------
Northeast,	Erie,	Municipal,	3,000	3,000	------	------	------	1	----	------	------

bEstimated by Water Supply Commission
xU. S. Census

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 15—Continued

Place	County	Company	Supply						Consumption (average daily)			
			Source			Method						
			Surface	Ground	Combined	Gravity	Pumped	Combined	Domestic (gals.)	Industrial (gals.)	Total (gals.)	Per capita (gals.)
Albion,	Erie,	Municipal,	---	---	1	1	---	---	40,000	---	40,000	27d
Conneautville,	Crawford,	Municipal,	---	1	---	1	---	---	26,000 a	4,000 a	30,000 a	---
Erie,	Erie,	Municipal,	1	---	---	---	1	---	11,597,000	5,210,300	16,807,300	210t
Girard,	Erie,	Municipal,	---	1	---	---	1	---	25,700	4,300	30,000	45t
Northeast,	Erie,	Municipal,	---	---	1	---	---	1	140,000 a	260,000 a	400,000 a	---

aEstimated by water companies
dDomestic
tTotal

RAILROAD WATER SUPPLIES, SECTION NO. 15

PENNSYLVANIA

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Renovo Division				
Belle Valley,	Spring,	Gravity,	15,000	
Erie City Lake Yard,	Municipal works,			90,000
Erie City "OD" Yard,	Municipal works,			530,000

LAKE SHORE & MICHIGAN SOUTHERN

Erie City,	Municipal works,			92,500
North East,	Municipal works,			36,600
North Girard,	Wells,	Pumped,	12,000	
Springfield,	Lake Erie,	Pumped,	500,000	
Wesleyville,	Erie City, municipal,,			297,800

NEW YORK, CHICAGO & ST. LOUIS

Cascade,	Erie City, municipal,			4,400
Crayton,	Well,	Pumped,		
Erie City,	Municipal works,			26,500
Fairview,	Well,	Pumped,		
Girard,	Well,	Pumped,		
Harbor Creek,	Well,	Pumped,		
Moorheads,	Well,	Pumped,		
North East,	Municipal works,			108,000
Springfield,	Well,	Pumped,		
State Line,	Well,	Pumped,		
Swanville,	Well,	Pumped,		
Thornton Jct.,	Well,	Pumped,		
Wallace Jct.,	Well,	Pumped,	148,000	

BESSEMER & LAKE ERIE

Albion,	Creek,	Pumped,	350,000	
Conneautville,	Conneaut Creek,	Pumped,	40,000	
Cranesville,				
Dicksonburg,	Springs,	Gravity,		
Erie City,	Municipal works,			23,000
Wallace Jct.,	N. Y., C. & St. L. R. R.		5,000	
Totals,			1,070,000	1,208,800

ALBION BOROUGH, ERIE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census 1,534; increase since 1900, 839. Estimated 1915, 2,000a

LOCATION

Southwestern Erie County, on Temple Creek, tributary to Conneaut Creek; on Pennsylvania Lines West of Pittsburgh, and Bessemer & Lake Erie railroads. Range of elevations in built-up section 94 feet.

INDUSTRIES

Extensive yards of Bessemer & Lake Erie R. R., just north and partly in borough; structural iron works and grist mill.

WATER SUPPLY

Municipal works built in 1911.

SOURCE AND COLLECTION

Springs near head of Temple Creek, above junction of north and south branches, near Pont Village and 4 miles southeast of borough.

Spring	Location	Elevation (city datum) (feet)	Capacity (gals. daily)	Pipe connection
Warren,	2,350 feet up So. Branch from junction. Elevation at junction 258	294	40,000	4-inch down stream to 8-inch main at junction
Main,	330 feet to 4,400 feet above junction on No. Branch	299	20,000	2,247 feet of 6-inch pipe from 8-inch main at junction with 4-inch pipe to springs
Godfrey No. 1,		310	20,000	
West,		328	3,500	

Four drilled wells near main spring and three springs about 5,790 feet above junction; English Spring, elevation 358, capacity 20,000 gallons daily; Godfrey No. 3, same capacity and Godfrey No. 2, may be connected up if necessary. Water soft.

From junction of north and south branches 8-inch main 14,000 feet down valley creek to 1,900,000 gallon distributing reservoir, about 1 mile southeast of borough.

DISTRIBUTION

By gravity through 8-inch main, 5,500 feet to eastern borough line; pressures 40 to 68 pounds; 4 miles distributing mains, 4-inch to 8-inch, 40% 6-inch; 37 fire hydrants, 4-inch,

CONSUMPTION

Supply to 1,500 people; 256 taps, all metered. Average consumption 40,000 gallons daily, all domestic.

INDUSTRIAL

Railroad pumps supply from Temple Creek, just above borough.

COST AND REVENUE

Total cost of works, about $35,000; annual operating expenses, about $1,500; gross revenue (1913), $2,023.

CONNEAUTVILLE BOROUGH, CRAWFORD COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 867; decrease since 1900, 53. Estimated 1915, 1,000a

LOCATION

Northwestern Crawford County, along Conneaut Creek; on Bessemer & Lake Erie R. R. Built-up portion, rolling land, range of elevation 60 feet.

INDUSTRIES

Agriculture; furniture factory, chair factory, basket factory, cut hay works, foundry, creamery, flour and feed mill.

WATER SUPPLY

Municipal works installed in 1889.

SOURCE AND COLLECTION

Bradley Springs, 1 mile southeast of borough; water collected in 11,000 gallon covered basin; minimum flow 72,000 gallons daily. Water flows through gravity main 5,500 feet to 141,142 gallon reservoir in southeastern corner of borough, 90 feet above residential district; water level at springs 6 feet higher than bottom of reservoir. Water medium hard.

Auxiliary supply in emergencies can be obtained from drilled well 108 feet deep, in southeastern part of borough, or from Mang Springs, the former source of supply. These springs are 1 mile south of

borough; water collected in 30,000 gallon reservoir, 40 feet above residential district. In droughts, spring flows 21,000 gallons daily. A 6-inch gravity main leads to borough, giving 17 pounds pressure.

DISTRIBUTION

By gravity through 1 mile of 6-inch main from Bradley Springs reservoir; pressures 10 to 45 pounds. Distributing mains, 4 miles, 4-inch and 6-inch, 75% 6-inch; 33 fire hydrants, 4-inch.

CONSUMPTION

Supply to 850 people; 230 taps, 86 metered; 5 metered industrial taps. Stated consumption 30,000 gallons daily, 4,000 gallons industrial. No means of measurement.

The "Kon Yot" mineral water, from drilled well 2,600 feet deep owned by Hotel Power, used for drinking and bathing purposes; bottled and shipped as "Kon Yot Lithia Bromide Water."

COST AND REVENUE

Total cost of works, about $20,000; annual operating expenses, $300; gross revenue, approximate, $1,250.

ERIE CITY, ERIE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 66,525; increase since 1900, 13,792. Estimated 1915, 73,798x

LOCATION

Central northern Erie County, on Lake Erie, facing harbor of Presque Isle Bay, formed by semicircular peninsula, 8 miles in arc and 5.5 miles in chord; attached to mainland at western end, open near mainland at eastern end, composed of drift, sand and gravel, enclosing a shallow bay 5 miles long and 2 miles wide, entirely protected from storms. On Lake Shore & Michigan Southern R. R.; New York, Chicago & St. Louis R. R.; terminus for Erie Division of Pennsylvania R. R., and for Bessemer & Lake Erie R. R.; on five steamboat lines; connected with Buffalo by Buffalo & Lake Erie traction line, with Cleveland by Cleveland & Erie Electric Ry. Surface of city rises abruptly from bay to elevation 60 and gradually to elevation 240, in southern portion.

INDUSTRIES

Important lake port and manufacturing center; exports petroleum, coal, iron and machinery; imports iron ore, copper ore, lumber, pulpwood and grain; large fishing interests; manufacturing plants extend in semicircle around city, partly within and partly without. About 5,000 population in suburbs.

WATER SUPPLY

Municipal plant installed in 1868. First supply, 1860 to 1868, from springs in city.

SOURCE AND COLLECTION

Lake Erie; 60-inch intake pipe, 17,641 feet long, extends from pumping station, at foot of Chestnut Street, across bay and about 1 mile into Lake Erie; intake crib of timber, with top 26 feet below mean lake level. An intake, built 1868, extends 975 feet into bay, has not been used since 1896. An intake crib, used from 1896 to 1908, before lake crib was completed, is at bottom of bay, 13 feet below mean water level.

Water flows through settling basin No. 1, capacity 24,000,000 gallons, on peninsula. Two 20,000,000 gallon centrifugal pumps, driven by Shepard engines, lift water to mechanical filters, capacity 20,000,000 gallons daily. The Bethlehem triplex pump, with 42-inch intake in clear water basin, pumps water through 24-inch force main to low service, and through 30-inch force main to standpipe for high service.

Pumping equipment consists of:

Number and type	Date of manufacture	Rated capacity
One Gaskill duplex pump,	1886	5,000,000 gallons daily
One Worthington duplex pump,	1893	12,000,000 gallons daily
One Worthington duplex pump,	1899	8,000,000 gallons daily
One Bethlehem triplex pump,	1913	20,000,000 gallons daily
Four Erie horizontal tubular boilers,	1897	150 hp.
Four Erie water tube boilers,	1913	250 hp.

DISTRIBUTION

Low service district includes territory north of Nineteenth Street; elevations range from lake level to 140. Supplied by pumping directly into mains, with equalizing reservoir, capacity 33,000,000 gallons, at elevation 237, in southern part of city, 2 miles from pumping station.

High service district elevations range from 120 to 240. Supplied by standpipe, near reservoir, 25 feet diameter and 80 feet high, capacity 293,756 gallons.

Pressures as follows:

District	Average	Maximum	Minimum
High service,	49	63	35
Low service,	58	92	39
Whole city,	56	92	35

Distributing mains as follows:

Size (inches),	42	30	24	20	12	8	6	4	4	Total
Length (miles),	(27 ft.)	2.1	2.2	4.8	23.0	0.6	87.4	24.8	2.9	147.8
Per cent.,	----------	1	2	3	16	--------	59	17	2	100

More than 64 miles of service pipe; 926 fire hydrants.

CONSUMPTION

Supply to 80,000 people; through 18,091 taps, 416 metered. About 31% of consumption metered, industrial. Stated average daily consumption 16,807,324 gallons, 210 gallons per capita, or 144 gallons domestic per capita.

COST AND REVENUE

Net cost of works to January 1, 1914, $3,324,574; operating expenses (1913), $83,187; gross revenue (1913), $299,570.

Water furnished free to city for public uses.

GIRARD BOROUGH, ERIE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,165; increase since 1900, 211. Estimated 1915, 1,200b

LOCATION

Northwestern Erie County, near Elk Creek; on Bessemer & Lake Erie R. R., and Cleveland & Erie Electric Ry.

INDUSTRIES

Wrench factory, cast-iron foundry; woodworking factory, flouring mill and tannery.

WATER SUPPLY

Municipal works built in 1899.

SOURCE AND COLLECTION

Spring at head of small run which flows into Lake Erie, about 1 mile north of borough. Water piped from 23,000 gallon well over spring 40 feet to 3,360 gallon well at pumping station; pumped by 225,000 gallon Rumsey triplex pump, with 6-inch suction and 4-inch discharge, 1 mile to 6-inch main at distributing system.

DISTRIBUTION

By pumping directly into mains with 6-inch connection to 68,000 gallon standpipe just south of borough; pressure 52 pounds.

CONSUMPTION

Supply to 660 people; 180 taps. Average daily consumption 30,000 gallons, 4,300 industrial; maximum 60,000 gallons daily, measured by pump displacement. Wrench factory uses about 50,000 gallons monthly; high-school 100,000 gallons, and woodworking factory 80,000 gallons, besides pumping from private dug well.

NORTH EAST BOROUGH, ERIE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census 2,672; increase since 1900, 604. Estimated 1915, 3,000a

LOCATION

Northeastern Erie County, about 2 miles from Lake Erie, on Sixteen Mile Creek; on Lake Shore & Michigan Southern and New York, Chicago & St. Louis railroads and Buffalo & Lake Erie traction line.

INDUSTRIES

Grape and fruit district; grape juice plant, electrical supply works, canning factory, ice plant and flour mill. Seat of St. Mary's College.

WATER SUPPLY

Municipal works built in 1885. St. Mary's College has private supply, installed in 1902.

SOURCE AND COLLECTION

(1) Twelve springs, 3 miles southeast of borough, minimum flow 200,000 gallons daily. Water collected in basins from which 3-inch and 4-inch pipes lead into 4-inch pipe to 4,000,000 gallon distributing reservoir on bluff above creek, 1.5 miles southeast of and 238 feet above borough; also fed by several neighboring springs. Water soft.

(2) Branch of Sixteen Mile Creek; impounding reservoir, capacity 80,000,000 gallons, 2 miles southeast of distributing reservoir and joined to same by 6-inch gravity main 8,000 feet long. A spring just below reservoir piped by 4-inch pipe to 6-inch main. Water flows through 300,000 gallon pressure filter, first being treated with chemical in 6,000 gallon settling tank. Water medium hard.

(3) Sixteen Mile Creek; intake at foot of bluff near distributing reservoir, where 250,000 gallon Snow duplex pump with 5-inch suction and 30 hp. portable boiler forces water, under 128 feet head, through 600 feet of 4-inch main to reservoir. Watershed area 4 square miles.

DISTRIBUTION

By gravity through 8-inch main from distributing reservoir; pressures 75 to 100 pounds; 15 miles distributing mains, 2-inch to 8-inch, 80% 4-inch; 60 fire hydrants, $5\frac{3}{4}$-inch.

CONSUMPTION

Supply to 3,000 people through 750 taps, which include 10 houses just outside northeast limits of borough; 50 domestic and 25 industrial taps metered. Stated consumption 400,000 gallons daily, 35% domestic and 65% industrial. No means of measurement. Industrial consumption: Electrical supply works, 3,000 gallons; flour mill, 4,000 gallons; Lake Shore & Michigan Southern (2 tanks) 33,000 gallons; "Nickel Plate" R. R., 100,000 gallons; ice plant (April to November), 50,000 gallons.

PRIVATE SYSTEM, ST. MARY'S COLLEGE

Duplex pump, capacity 350,000 gallons daily, pumps from drilled well, directly to piping system through 4-inch discharge line. Excess backs into two tanks which, when full, automatically shut down pump. A 2-inch line through buildings also connected with municipal system for additional fire protection.

SECTION No. 16.

OHIO RIVER

UPPER ALLEGHENY SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

SECTION No. 16.

OHIO RIVER—UPPER ALLEGHENY SUB-BASIN.

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section is in the northwestern part of the State, its longest dimension following the New York boundary, its western corner touching Lake Erie, and extending southward to the mouth of the Clarion River. Its greatest width is 120 miles and its area 4,490 square miles. The Allegheny River passes from northeast to southwest, through its center. It includes all of Warren County and the greater portions of McKean, Forest, Crawford and Venango counties and portions of Potter, Elk, Erie, Mercer, Clarion, Armstrong and Butler counties.

SURFACE CHARACTERISTICS

It lies in the Allegheny Plateau region at a comparatively high elevation. To the east of the Allegheny River, its tributaries are in deep, narrow valleys and ravines through which the small streams reach the wider valley of the main stream, which is bordered by high hills. The large creeks coming from the west, Brokenstraw, Oil and French creeks, drain a flatter region and follow winding courses through swampy areas with an occasional lake or pond. The terminal moraine crosses this section, nearly parallel with, and a few miles west of, the Allegheny River.

This river rises in the extreme eastern corner of the section, flows northward into New York, and bends southwest to enter Pennsylvania again, north of Warren on the Warren-McKean county line. The larger tributaries are Tuneungwant, Kinzua and Tionesta creeks from the south and east, and Conewago, Brokenstraw, Oil and French creeks from the west.

POPULATION

The population in 1910 was somewhat less than 246,000, an increase of but 0.2% since 1900. The density of population is 54 per square mile, the urban population being 27%. The larger communities, which are along the Allegheny River, are Warren, Oil City,

and Franklin. In French Creek Valley are Corry and Meadville. Titusville is on Oil Creek, Bradford on Tuneungwant Creek, and Kane on the summit between the headwaters of Tionesta Creek and Clarion River.

RESOURCES AND INDUSTRIES

This section is the oil and gas producing part of the State, the valleys of the Allegheny River, Oil and Tionesta creeks containing many operating wells. On the hills to the east of the river and throughout the western district agriculture is an important industry, and in the Tionesta Creek valley are large lumbering operations. The section contains bituminous coal, brick clay and building stone. In the larger towns are several oil refineries, tanneries and diversified industries. In the western part are mineral springs, which make it to some extent a health resort.

WATER SUPPLY

Owing to the sparse population, relatively few great industrial establishments, and numerous large and small streams, the water supply is both copious and relatively good. Tionesta Creek is polluted by tannery waste, and Oil and French creeks receive industrial and domestic waste from numerous industrial centers. There is no distinctive district of high consumption of water, five cities, one borough and one village scattered through this section using about 12,000,000 gallons out of a total of 16,600,000 gallons supplied by public systems. Underground sources predominate, and pumping and gravity methods of delivery are employed about equally.

There are 11 municipally owned systems, among which are five out of the total of six cities. About half of the boroughs have public supplies. The aggregate population supplied by public systems, is slightly over 130,000.

There are not many large industrial consumers, the total recorded industrial use amounting to only 16,200,000 gallons. Railroads consume 5,550,000 gallons, 15% of this being obtained from public supplies. This section is ninth as regards total water consumption and seventeenth as to intensity of consumption per square mile.

The following tables give a summary of the water supplies in this section, both domestic and industrial, after which are detailed descriptions of the water supply systems arranged alphabetically according to places supplied:

Place	County	Company	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Bradford,	McKean,	Municipal,	14,789x	14,789		1					
Cambridge Springs,	Crawford,	Municipal,	1,700	1,550				1			
		Private, to Riverside Hotel,		(200)							
Clarendon,	Warren,	Private, Dr. I. G. Hyer,	1,000	700					1		
Cochranton,	Crawford,	Municipal,	700	700				1			
Corry,	Erie,	Corry W. S. Co.,	7,000	5,500	1						
Coudersport,	Potter,	Cons. W. Co. of Coudersport,	3,200	2,900			1				
Crosby,	McKean, Norwich Twp.,	Private, Crosby W. Co. (unine.),	250	200							1
Edinboro,	Erie,	Municipal,	800	500				1			
Eldred,	McKean,	Galeton-Eldred W. Co.,	1,700	1,700			1				
Emlenton,	Venango,	Emlenton W. Co.,	1,100	1,000			1				
Foxburg,	Clarion, Richland Twp.,	Foxburg W. W. Co.,	650	650						1	
Franklin,	Venango,	Municipal,	11,059x	12,000		1					
Franklin, suburbs of,	Venango,	Private, Hill Spring W. Co. (unine.)		100	1‡						
Grand Valley,	Warren,	Private, L. C. Allen,	300	150					1		
Hazelhurst,	McKean, Hamlin Twp.,	Hazelhurst W. Co.,	1,600	1,600						1	
James City,	Elk, Highland Twp.,	Crystal Springs Park W. Co.,	500	500						1	
Kane,	McKean,	The Spring W. Co. of Kane,	7,500	7,500			1				
Ludlow,	McKean, Hamilton Twp.,	Private, J. G. Curtis,	1,200	300							1
		Private, Ludlow Real Est. Co.,		125							1
Meadville,	Crawford,	Municipal,	13,637x	14,000		1					
Kerrtown,	Crawford, Vernon Twp.,		500							**	
Mt. Jewett,	McKean,	Mt. Jewett W. Co.,	1,750	1,750			1				
North Warren,	Warren, Conewango Twp.,	Private, E. T. Hazeltine,	2,000	60							1
Oswayo,	Potter,	Oswayo W. Co.,	250	200			1				
Oil City,	Venango,	Municipal,	18,971x	19,000		1					
Oil City, suburbs of,	Venango,										
Pleasantville,	Venango,	Municipal,	725	500				1			
Polk,	Venango,	Private, State Institution,	(2,500)	(2,000)							
Port Allegany,	McKean,	The Port Allegany W. Co.,	2,500	1,600			1				
Brooklyn,	McKean, Liberty Twp.,		500								
Reno,	Venango, Sugar Creek Twp.,	Private, A. L. Confer,	300	100							1
		Private, Venango Oil & Land Co.,		200							1
Roulette,	Potter, Roulette Twp.,	Roulette W. Co.,	1,100	655						1	
Rouseville,	Venango,	Stone Hill W. Co.,	700	500			1				

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 16—Continued

Place	County	Company	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Saegertown,	Crawford,	Municipal,	725	100				1			
		Private, Saegertown Inn,		150					1		
Sandy Lake,	Mercer,	Sandy Lake W. W. Co.,	640	400			1				
Sheffield,	Warren, Sheffield Twp.,	Sheffield W. Co.,	2,500	1,500						1	
Shinglehouse,	Potter,	Shinglehouse W. Co. (uninc.),	1,600	800					1		
Smethport,	McKean,	Smethport W. Co.,	1,856	1,860			1				
State Hospital for Insane, Warren	Warren,	Private,	(1,800)	(1,800)							
State Normal School, Edinboro	Erie,	Private,	(400)	(400)							
Sugar Creek,	Venango, Sugar Creek Twp.,	Private, Venango County Home,	(150)	(150)							
Tidioute,	Warren,	Tidioute W. Co.,	1,200	900			1				
Tionesta,	Forest,	Tionesta W. Co.,	950	955			1				
Titusville,	Crawford,	Municipal,	8,684x	8,600		1					
Union City,	Erie,	Municipal,	4,400	3,500				1			
Warren,	Warren,	The Warren W. Co.,	15,214	15,000			1				
Waterford,	Erie,	Waterford W. Co.,	725	600			1				
West End,	Venango,	West End W. Co. of West End Borough	600	600			1				

xU. S. Census.
*About 61 per cent. unaccounted for.
‡Franklin and Oil City partly supplied by private plant.
**Municipally supplied

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 16—*Continued*

Place	County	Company	Supply: Source: Surface	Supply: Source: Ground	Supply: Source: Combined	Supply: Method: Gravity	Supply: Method: Pumped	Supply: Method: Combined	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Bradford,	McKean,	Municipal,	---	---	1	---	---	1	1,350,000a	450,000a	1,800,000a	------
Cambridge Springs,	Crawford,	Municipal,	1	---	---	---	1	---	95,000	30,000	125,000	81t
		Private, to Riverside Hotel,	---	---	---	---	---	---	60,000a	----------	60,000a	------
		Private, Dr. I. G. Hyer,	---	1	---	---	---	1	21,000b	----------	21,000b	------
Clarendon,	Warren,	Municipal,	---	1	---	1	---	---	19,000	1,000	20,000	29t
Cochranton,	Crawford,	Corry W. S. Co.,	---	1	---	---	1	---	165,000b	127,700a	292,700b	------
Corry,	Erie,	Cons. W. Co. of Coudersport,	---	---	1	---	---	1	175,000b	25,000b	200,000a	------
Coudersport,	Potter,	Private, Crosby W. Co. (uninc.),	---	1	---	1	---	---	6,000b	----------	6,000b	------
Crosby,	McKean, Norwich Twp.,	Municipal,	---	1	---	---	1	---	20,000	----------	20,000	40d
Edinboro,	Erie,	Galeton-Eldred W. Co.,	---	1	---	---	---	1	209,000a	----------	209,000a	------
Eldred,	McKean,	Emlenton W. Co.,	1	---	---	---	1	---	30,000b	20,000b	50,000b	------
Emlenton,	Venango,	Foxburg W. W. Co.,	---	1	---	---	1	---	40,000	----------	40,000	62d
Foxburg,	Clarion, Richland Twp.,	Municipal,	---	---	1	---	---	1	1,272,000	318,000	1,590,000	101d
Franklin,	Venango,	Private, Hill Spring W. Co. (uninc.)	---	1	---	1	---	---	3,000b	----------	3,000b	------
Franklin, suburbs of,	Venango,	Private, L. C. Allen,	---	1	---	1	---	---	4,500b	----------	4,500b	------
Grand Valley,	Warren,	Hazelhurst W. Co.,	---	---	1	1	---	---	37,500a	12,500a	50,000a	------
Hazelhurst,	McKean, Hamlin Twp.,	Crystal Springs Park W. Co.,	---	---	1	---	1	---	15,000b	1,985,000b	2,000,000	------
James City,	Elk, Highland Twp.,	The Spring W. Co. of Kane,	---	---	1	---	---	1	560,000a	440,000a	1,000,000a	------
Kane,	McKean,	Private, J. G. Curtis,	---	1	---	1	---	---	9,000b	----------	9,000b	------
Ludlow,	McKean, Hamilton Twp.,	Private, Ludlow Real Est. Co.,	---	1	---	1	---	---	4,800b	----------	4,800b	------
Meadville,	Crawford,	Municipal,	---	1	---	---	1	---	----------	----------	1,750,000	125t
Kerrtown,	Crawford, Vernon Twp.,	Mt. Jewett W. Co.,	---	1	---	---	1	---	31,000	94,000	125,000	71t
Mt. Jewett,	McKean,	Private, E. T. Hazeltine,	1	---	---	---	1	---	3,000a	----------	3,000a	------
North Warren,	Warren, Conewango Twp.,	Oswayo W. Co.,	---	1	---	1	---	---	4,000b	----------	4,000b	------
Oswayo,	Potter,	Municipal,	---	---	1	---	---	1	692,000	290,000	†2,000,000	105t
Oil City,	Venango,	Municipal,	---	1	---	---	1	---	50,000	----------	50,000	100d
Oil City, suburbs of,	Venango,	Private, State Institution,	---	---	---	---	---	---	300,000	----------	300,000	150d
Pleasantville,	Venango,	The Port Allegany W. Co.,	---	---	1	---	---	1	160,000a	240,000a	400,000a	------
Polk,	Venango,											
Port Allegany,	McKean,											
Brooklyn,	McKean, Liberty Twp.,											

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 16—Continued

Place	County	Company	Supply: Source: Surface	Supply: Source: Ground	Supply: Source: Combined	Supply: Method: Gravity	Supply: Method: Pumped	Supply: Method: Combined	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Reno,	Venango, Sugar Creek Twp.,	Private, A. L. Confer,	---	1	---	---	---	1	3,000b	------	3,000b	------
		Private, Venango Oil & Land Co.,	.	1	.	.	---	1	2,000a	------	2,000a	------
Roulette,	Potter, Roulette Twp.,	Roulette W. Co.,	---	---	1	1	---	---	20,000b	30,000a	50,000a	------
Rouseville,	Venango,	Stone Hill W. Co.,	---	1	---	---	---	1	15,000b	------	15,000b	------
Saegertown,	Crawford,	Municipal,	---	1	---	---	1	---	3,000b	------	3,000b	------
		Private, Saegertown Inn,	1	---	---	---	1	---	7,500b	------	7,500b	------
Sandy Lake,	Mercer,	Sandy Lake W. W. Co.,	---	---	1	1	---	---	12,000b	------	12,000b	------
Sheffield,	Warren, Sheffield Twp.,	Sheffield W. Co.,	1	---	---	1	---	---	37,500	6,100	43,600	29t
Shinglehouse,	Potter,	Shinglehouse W. Co. (unincr.),	---	1	---	---	---	1	24,000b	3,000b	27,000b	------
Smethport,	McKean,	Smethport W. Co.,	---	---	1	---	---	1	255,000	45,000	300,000	167t
State Hospital for Insane, Warren	Warren,	Private,	---	---	---	---	---	---	530,000	------	530,000	294d
State Normal School, Edinboro	Erie,	Private,	---	---	---	---	---	---	20,000	------	20,000	50d
Sugar Creek,	Venango, Sugar Creek Twp.,	Private, Venango County Home,	---	---	---	---	---	---	400a	------	400a	------
Tidioute,	Warren,	Tidioute W. Co.,	1	---	---	1	---	---	27,000b	------	27,000b	------
Tionesta,	Forest,	Tionesta W. Co.,	1	---	---	1	---	---	28,500b	------	28,500b	------
Titusville,	Crawford,	Municipal,	---	1	---	---	1	---	1,500,000	500,000	2,000,000	187d
Union City,	Erie,	Municipal,	---	---	1	---	---	1	105,000b	370,000b	475,000a	------
Warren,	Warren,	The Warren W. Co.,	1	---	---	---	---	1	590,000	318,000	908,000	61t
Waterford,	Erie,	Waterford W. Co.,	---	1	---	1	---	---	20,000	5,000	25,000	33d
West End,	Venango,	West End W. Co. of West End Borough	---	1	---	---	---	1	20,000a	15,000a	35,000a	------

aEstimated by water companies.
bEstimated by Water Supply Commission.
dDomestic.
tTotal.
†About 61% unaccounted for

RAILROAD WATER SUPPLIES, SECTION NO. 16

PENNSYLVANIA

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Allegheny Division				
Bradford,	Municipal works,			10,000
East Sandy,	Allegheny River,	Pumped,		
	Spring,	Gravity,	107,700	
Glade,	Warren Water Co.,			
Hemlock,	Hemlock Run,	Pumped,	200,000	
Kennerdell,	Allegheny River,	Pumped,		
	Spring,	Gravity,	68,000	
Kinzua,	Kinzua Creek,	Pumped,	150,000	
Martindale,	Spring,	Gravity,		
Newtown,	Spring,	Gravity,	400	
Oil City,	Allegheny River,	Pumped,	225,000	
Rockmere,	Allegheny River,	Pumped,	150,000	
Sedgwick,	Citizens Tract. Co.,			
	Spring,	Gravity,	63,000	
South Oil City,	Well,	Pumped,	110,000	
Thompsontown,	Thompson Run,	Pumped,	75,000	
Tionesta,	Allegheny River,	Pumped,		
	Little Hunter Run,	Gravity,	75,000	
Trunkeyville,	Allegheny River,	Pumped,	75,000	
Venango,	Springs,	Gravity,	40,000	
Wood Hill,	Well,	Pumped,	102,800	
	River,	Pumped,		
	Spring,	Gravity,		
Buffalo Division				
Colegrove,	Potato Creek,	Pumped,		
	Spring,	Gravity,	24,000	
Centerville,	Spring,	Gravity,	15,000	
Corry,	Municipal works,			72,000
Eldred,	Wells,	Pumped,	90,000	
Miller Farm,	Stream,	Gravity,	40,000	
Port Allegany,	Well,	Pumped,	150,000	
Wernwag,	Stream,	Gravity,	12,000	
Titusville,	Municipal works,			80,000
Renovo Division				
Bensons,	Creek,	Gravity,	15,000	
Colza,	Stream,	Gravity,	6,000	
Garland,	Stream,	Pumped,	40,000	
Kane,	Spring Water Co.,			290,000
	Well,	Pumped,	30,000	
Lovell,	Creek,	Gravity,	26,000	
Ludlow,	Stream,	Pumped,	40,000	
Ludlow,	Stream,	Gravity,	40,000	
Otts,	Stream,	Gravity,	150,000	
Roystone,	Stream,	Gravity,	15,000	
Scotts,	Creek,	Gravity,	20,000	
Sheffield,	Spring,	Gravity,	50,000	
Spring Creek,	Stream,	Gravity,	6,000	
Union City,	Spring,	Gravity,	25,000	
Warren,	Well,	Pumped,	100,000	

BALTIMORE & OHIO

Kane,	Spring Water Co.,			30,000
Foxburg,	Allegheny River,		96,000	
Mt. Jewett,	Mt. Jewett W. Co.,			12,000
Sheffield Jct.,	Well,	Pumped,	16,000	

BESSEMER & LAKE ERIE

Exposition Park,	Exposition Park Co.,	(Used only 3 months)		
Meadville,	Municipal works,			15,000
Meadville Jct.,	Old Canal,	Pumped,	230,000	

RAILROAD WATER SUPPLIES, SECTION NO. 16—Continued

BUFFALO, ROCHESTER & PITTSBURGH

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Bradford,	Municipal works,			1,600
Bradford shops,	Municipal works,			500
Bradford shops,	Tuneungwant Creek,	Pumped,	150,000	
Bradford timber preserving plant	Tuneungwant Creek,	Pumped,	25,000	
Bingham,	Well,	Pumped,	15,000	
Howard,	Tuneungwant Creek,	Pumped,	100,000	
Mt. Jewett,	Spring and well,	Pumped,	50,000	

ERIE

Meadville Division				
Cambridge Springs,	French Creek,	Pumped,	140,000	
Columbus,	Brokenstraw Creek,	Pumped,	150,000	
Corry,	Municipal works,			15,000
Geneva,	Stream,	Gravity,	20,000	
	Springs,	Gravity,	50	
Franklin,	Springs,	Gravity,	40,000	
Meadville,	Municipal works,			
Meadville shops,	Stream,	Pumped,	400,000	
Oil City,	Municipal works,			10,000
Union City,	Municipal works,			100,000
Utica,	Springs,	Gravity,	300,000	
Bradford Division				
Bradford,	Creek,	Pumped,	75,000	
Taintors,	Spring,	Gravity,		
Mt. Jewett,	B. R. & P. Ry.,			

LAKE SHORE & MICHIGAN SOUTHERN

Akeley,	Springs,	Gravity,		
Belmar,	Allegheny River,	Pumped,	105,000	
Franklin,	Municipal works,			18,900
Irvineton,	Well,	Pumped,	20,000	
Newton,	Springs,	Gravity,		
Oil City,	Municipal works,			138,400
Stoneboro,	Stoneboro Lake,	Pumped,	160,000	
Titusville,	Municipal works,			12,800

PITTSBURGH, SHAWMUT & NORTHERN

Dale,	Well,	Pumped,	20,000	
Kasson,	Stream,	Gravity,	60,000	
West Eldred,	Well,	Pumped,	30,000	

COUDERSPORT & PORT ALLEGANY

Coudersport,	Municipal works,			
Port Allegany,	Penna. R. R.,			

KANE & ELK

Crystal Springs,	Stream,	Pumped,		
East Kane,	Spring,	Gravity,	16,000	

RAILROAD WATER SUPPLIES, SECTION NO. 16—Continued

NEW YORK & PENNSYLVANIA

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Clara,	Spring,	Gravity,	4,000	
Shinglehouse,	Empire Glass Co.,		10,000	
POTATO CREEK				
Liberty,	Springs,	Gravity,	95,000	
Norwich,	Spring,			
Rocky Run,	Spring,			
TIONESTA VALLEY				
Bucher Mills,	Spring Run,	Gravity,	1,000	
Clarendon,	Spring Run,	Gravity,	1,000	
Sheffield,	Spring Run,	Gravity,	2,000	
	Sheffield W. Co.,			
S. Yard Limit,	Spring,	Gravity,	3,000	
VALLEY RAILROAD				
Westline,	Spring,	Gravity,	10,000	
Totals,			4,673,950	806,200

INDUSTRIAL WATER SUPPLIES, SECTION NO. 16 (MISCELLANEOUS COMPANIES)
Does not Include All the Smaller Companies

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product	Returned to stream (%)	Increase in temp. °F
				Domestic	Industrial			
Brookston, Forest County,	Elk Tanning Co.,	Bogus Run,		8,000b				
		Drilled wells,		(250 pop.)	280,000			
		Springs,						
Clarendon, Warren County,	Elk Tanning Co.,	Tionesta Creek,	Pumped,		250,000			
		Spring,						
		Wells,						
Crosby, McKean County,	Heinemann Chemical Co.,	(See Crosby, Sec. No. 16),		6,000b (200 pop.)	533,000			
Custer City, McKean County,	Hillside Oil Co.,	(See Custer City, Sec. No. 16)		1,500b (50 pop.)				
Coudersport, Potter County,	Elk Tanning Co.,	(See Coudersport, Sec. No. 16)		3,000b (100 pop.)	300,000			
Emlenton, Venango County,	Emlenton Refining Co.,	Allegheny River,	Pumped,		240,000	1,000 bbls.	50	40
Franklin, Venango County,	American Steel Foundries,	French Creek,	Pumped,		175,000	29 tons	75	20
Glade, Warren County,	Elk Tanning Co.,	Allegheny River,			250,000			
		Wells,						
Hazelhurst, McKean County,	Berney-Bond Glass Bottle Co.	Marvin Creek,	Pumped,		350,000			
James City, Elk County,	American Plate Glass Co.,	Crystal Spgs. Park W. Co.			(1,500,000)			
Kane, McKean County,	American Window Glass Co.	Pond,	Pumped,		125,000		75 to (pond)	20
		Spring,	Gravity,					
		Drilled wells (2),	Pumped,					
Ludlow, McKean County,	J. G. Curtis Leather Co.,	(See Ludlow, Sec. No. 16),		8,000b (170 pop.)	532,000	1,000 hides	100	6
Mt. Jewett, McKean County,	Consolidated Window Glass Co.	Drilled Wells,			21,000			
		Mt. Jewett W. Co.,			(15,000)			
Oil City, Venango County,	National Transit Co.,	Allegheny River,	Pumped,		s 275,000		100	12
		Municipal Works,			(2,000)			
Kennerdell, Venango Co.,	Pittsburgh Plate Glass Co. (sand plant)	Allegheny River,	Pumped,		1,200,000		90	0
Port Allegany, McKean County	Elk Tanning Co.,	(See Port Allegany, Sec. No. 16)		6,000b (200 pop.)	300,000			
Reno, Venango County,	Empire Oil Works,	Allegheny River,	Pumped,		20,000			
Shinglehouse, Potter County,	Empire Window Glass Co.	(See Shinglehouse, Sec. No. 16)		6,000 (200 pop.)				
Sheffield, Warren County,	Elk Tanning Co.,	(See Sheffield, Sec. No. 16)		6,000b (200 pop.)	1,153,000			

Stoneham, Warren County, --	E. N. Smith tannery, ----	Dutchman Run, springs and wells	Gravity and pumped	3,000b (100 pop.)	150,000	----------	----------	----------
Titusville, Crawford County,-	Elk Tanning Co., --------	(See Titusville, Sec. No. 16)	----------	----------	250,000	----------	----------	----------
Totals from private systems	----------	----------	----------	47,500	6,404,600	----------	----------	----------

bWater for steam purposes

BRADFORD CITY, McKEAN COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 14,544; decrease since 1900, 485. Estimated 1915, 14,789 (U. S. Census)

LOCATION

Northern central McKean County, 3 miles from New York State line, at junction of East and West Branches of Tuneungwant Creek; on Erie R. R., Buffalo, Rochester & Pittsburgh R. R., and Western New York & Pennsylvania Traction Co.'s line.

INDUSTRIES

In center of oil fields; seven tool and engine manufacturing plants, two cast-iron foundries, saw manufacturing plant, pipe and pipe coupling works, electrical supplies plant, brass foundry, automobile factory, furniture factory, two cutlery plants, razor strop factory, brick yard, terra-cotta plant, two oil refineries and three planing mills.

WATER SUPPLY

Municipal works built in 1884. Supply by Bradford Water Works Co., incorporated 1877, purchased by city in 1882; old supply by pumping from West Branch Tuneungwant Creek.

SOURCE AND COLLECTION

Two impounding reservoirs, one distributing reservoir, drilled wells, pumping station and two gravity supply mains.

(1) Marilla Creek, tributary of West Branch Tuneungwant Creek. City owns about 8,000 acres of watershed.

Reservoir No. 3, capacity 120,000,000 gallons, 5 miles west of, and 306 feet above city; watershed area 5.25 square miles; minimum flow reported as 154,925 gallons daily, by weir measurement.

Small intake dam 0.5 mile below Reservoir No. 3, 12-inch line to Reservoir No. 1, capacity 4,500,000 gallons, 236 feet above city; used only when it is necessary to pump from drilled well supply. Since enlargement of No. 2 reservoir it is expected that No. 1 reservoir and wells can be abandoned.

A 16-inch main from Reservoir No. 3 to 12-inch line from intake and to city as 14-inch, with connection to Reservoir No. 1. Water soft.

(2) Gilbert Brook, tributary of Marilla Creek 0.5 mile below Reservoir No. 1; Reservoir No. 2, 0.75 mile from mouth, capacity

200,000,000 gallons, at elevation 1,709, or 256 feet above city; watershed area 6.67 square miles; minimum flow 207,092 gallons daily, weir measurement. A 12-inch main has valved connection with 14-inch main from other reservoirs, and parallels 14-inch main to city. Water soft.

(3) Eleven 8-inch drilled wells, 80 to 130 feet deep, in northwestern part of city, near Bennett Brook. Water raised by 2,000,000 gallon centrifugal pump connected to 135 hp. gas engine, 8-inch suction to 14-inch main from Marilla Creek supply, thence to distributing reservoir; held in reserve for emergencies. Water medium hard.

DISTRIBUTION

A 12-inch main 5 miles long supplies distributing system direct; 14-inch main 5 miles to 3,500,000 gallon distributing reservoir on hill in northwestern corner of city; 24-inch line from reservoir to city. Total mains as follows:

Size (inches),	24	16	14	12	10	8	6	4	3 and smaller	Total
Length (miles),	0.5	0.5	5.6	5.1	0.8	2.6	16.5	6.0	0.2	37.8
Per cent.,	1	1	15	14	2	7	44	16	----------	100

Two hundred ninety-eight fire hydrants, 5-inch.

CONSUMPTION

Supply to entire population; 3,977 taps. Average consumption 1,800,000 gallons daily, maximum 3,800,000 gallons, by measurement; 75% domestic and 25% industrial; 116 taps metered, 95% industrial.

COST AND REVENUE

Total cost of works, $592,490; annual operating expenses $6,000 to $10,000; gross revenue, $30,000 to $33,000.

CAMBRIDGE SPRINGS BOROUGH, CRAWFORD COUNTY

MUNICIPAL WATER WORKS
PRIVATE SUPPLY

Population 1910 census, 1,514; increase since 1900, 19. Estimated 1915, 1,700a

LOCATION

Northern central Crawford County, on French Creek; on Erie R. R. Erie traction line, and Meadville & Cambridge Springs street railway. Range of elevation in built-up section 150 feet.

INDUSTRIES

Agriculture; health resort and summer resort noted for its mineral springs; cement mixer manufacturing plant.

WATER SUPPLY

Municipal plant installed in 1898. Private system of Riverside Hotel.

MUNICIPAL WATER WORKS

SOURCE AND COLLECTION

French Creek; pumping station 300 feet north of creek, in northern part of borough. Pumping equipment two 500,000 gallon Gould triplex pumps, one 700,000 gallon centrifugal pump held in reserve, and one 125 hp. Scotch Marine boiler.

One Gould pump, with 8-inch suction in creek, pumps through 6-inch force main to 28,800 gallon settling tank; water flows from settling tank through two mechanical filter beds, capacity 500,000 gallons daily, to clear water well, capacity 14,700 gallons. Other Gould has 8-inch suction in clear water well, and 6-inch force main connecting to 10-inch main of distributing system.

DISTRIBUTION

By pumping directly into mains with 10-inch connection to 117,000 gallon equalizing standpipe on hill in southwestern part of borough; pressures 80 to 90 pounds; 4.3 miles distributing mains, 4-inch to 8-inch, over 5% 6-inch; 52 fire hydrants, 70% 6-inch and 30% 4-inch.

CONSUMPTION

Supply to 1,550 people; 431 taps, 410 domestic metered and 16 industrial metered. Average daily consumption, 125,000 gallons; maximum in summer 165,000 gallons, when population reaches more than 5,000; 75% domestic and 25% industrial; measured by pump displacement.

RIVERSIDE HOTEL (Private System)

SOURCE AND COLLECTION

Riverside Hotel is in northeastern part of borough, on north bank of French Creek.

(1) Drilled well, 114 feet deep, near hotel; water pumped through 1½-inch pipe to hotel.

(2) French Creek; pumping station directly in front of hotel, containing two Wilson & Snyder pumps; two 3-inch intakes in creek; water pumped through two 2½-inch lines to mechanical filter.

(3) Gray mineral spring 1,500 feet northeast of hotel; water pumped through 1-inch line 500 feet west to pavilion.

(4) Magnesia spring 1,700 feet north of hotel; water pumped through 1-inch line east to a pavilion.

DISTRIBUTION

From (1) by pumping to hotel for drinking and cooking purposes.

From (2) by gravity through 2½-inch line from filter for general purposes; pressure 65 pounds.

CONSUMPTION

Supply to 200 persons. Stated average daily consumption 60,000 gallons.

CLARENDON BOROUGH, WARREN COUNTY

PRIVATE SUPPLY

Population 1910 census, 933; decrease since 1900, 159. Estimated 1915, 1,000

LOCATION

Central eastern Warren County, on Tionesta Creek; on Pennsylvania R. R., Tionesta Valley R. R. and Warren street railway.

INDUSTRIES

Oil production, refineries, tannery and lumber mill.

WATER SUPPLY

Private system owned by Dr. I. G. Hyer; in operation since 1884.

SOURCE AND COLLECTION

(1) Five-inch drilled well, 171 feet deep, in central part of borough. Pumping station over well, containing gas engine, using natural gas and operating deep well pump, capacity 108,000 gallons daily; pumps directly into distributing system through 3-inch force main.

(2) Fire protection system, entirely separate from (1). Spring on hillside north of borough; 12-inch pipe to two tanks, capacity of each 38,000 gallons, just below spring. Two refineries connected to this system can pump into it from drilled wells; pressure 125 pounds.

DISTRIBUTION

From (1) excess water backs up into 42,000 gallon concrete tank 2,000 feet north of pumping station, on hill at north edge of borough; pressure 39 pounds.

From (2) by gravity through 5-inch main connecting to fire hydrants.

CONSUMPTION

Supply to 700 people; 142 taps. Consumption not known; assuming 30 gallons per capita, would be 21,000 gallons, all domestic.

COCHRANTON BOROUGH, CRAWFORD COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 695; increase since 1900, 55. Estimated 1915, 700a

LOCATION

Southern Crawford County, on east bank of French Creek; on Erie R. R.

INDUSTRIES

Agriculture, machine shop, saw mill, grist mill, handle factory and lime sower factory.

WATER SUPPLY

Municipal works installed in 1893.

SOURCE AND COLLECTION

(1) Wilson Springs, on hillside 1.5 miles west of borough; 700 gallon receiving basin over one spring, 2-inch line 0.5 mile to 187,000 gallon reservoir; water from other two springs piped through 2-inch lines to 2-inch line from reservoir. Water soft.

(2) Staughton Spring, 2 miles east of borough, at high elevation; over it a 1,350 gallon reservoir; 4-inch pipe 1.5 miles to 288,000 gallon steel tank.

DISTRIBUTION

By gravity through 1 mile of 6-inch line from Wilson Spring reservoir, joined in borough by 4-inch line, 0.5 mile long, from Staughton

Spring. Higher elevation of latter backs water into tank and reservoir at Wilson Spring when demand is low. Pressures 90 to 105 pounds; 1.5 miles distributing mains, 4-inch; 25 fire hydrants, 4-inch.

CONSUMPTION

Supply to 700 people; 250 taps, all metered. Average daily consumption 20,000 gallons, 95% domestic and 5% industrial.

COST AND REVENUE

Total cost of works, $20,000; annual operating expenses $1,000; gross revenue, $1,500.

INDUSTRIAL SUPPLIES

All industries have private supplies from drilled wells.

CORRY CITY, ERIE COUNTY

CORRY WATER SUPPLY COMPANY

Population 1910 census, 5,991; increase since 1900, 622. Estimated 1915, 7,000a

LOCATION

Southeastern Erie County, at headwaters of South Branch of French Creek, and on Hare Creek, tributary of Big Brokenstraw Creek; on Northern, Buffalo & Erie Divisions of Pennsylvania R. R.; Erie R. R. and Corry & Columbus street railway.

INDUSTRIES

Logging, locomotive works, radiator and boiler works, machine shops, chain factory, brass bed and furniture factories, handle and brush block factory, brake shoe factory, planing and saw mills, powder plant, tannery, condensery and grist mills.

WATER SUPPLY

Corry Water Supply Co., reorganized 1891 from Corry Water Co., incorporated 1886. Several mineral springs in vicinity, Pure Mineral Spring owned by Thomas Pine, and Lithia Spring owned by Mr. Hardcastle.

SOURCE AND COLLECTION

Fourteen drilled wells, 2 on east bank and 12 on west bank of Hare Creek, just north of city limits. Pumping station at wells contains one 1,000,000 gallon Holly pump and one 2,000,000 gallon Laidlaw-Dunn-Gordon pump, 16-inch suction line 6-inch and 4-inch connections to wells. A 12-inch force main to distributing system and to reservoir. Water medium hard; large supply available.

DISTRIBUTION

By pumping direct to system, with 12-inch connection to 5,000,000 gallon equalizing reservoir on hill in southwestern part of city; pressures 80 to 137 pounds. Distributing mains as follows:

Size (inches),	8	6	4	3	2 and smaller	Total
Length (miles),	0.3	7.9	3.8	0.1	4.3	16.4
Per cent.,	2	48	23	1	26	100

Eighty-five fire hydrants, two $6\frac{1}{4}$ inch, remainder $5\frac{3}{4}$ inch.

CONSUMPTION

Supply to 5,500 people; 1,520 taps; 20 industrial, 1,400 metered. Average daily consumption 850,000 gallons, about 30% domestic and 70% industrial.

Supplies Pennsylvania R. R. tank in west end of city with 33,000 gallons daily and Erie R. R. tank at station with 200,000 gallons daily.

COUDERSPORT BOROUGH, POTTER COUNTY

CONSOLIDATED WATER COMPANY OF COUDERSPORT

Population 1910 census, 3,100; decrease since 1900, 117. Estimated 1915, 3,200a

LOCATION

County seat, west central Potter County, in narrow valley near headwaters of Allegheny River; on Coudersport & Port Allegany R. R.

INDUSTRIES

Silver truss factory, barrel factory, mangle and roller factory and tannery.

WATER SUPPLY

Consolidated Water Co., of Coudersport, incorporated 1900 as East Coudersport Water Co.; name changed 1906 upon purchase of Citizens Water Co., incorporated 1883. Both companies operating before consolidation. Elk Tanning Co. has private supply.

SOURCE AND COLLECTION

(1) Rees Hollow Run, tributary of Allegheny River from east, just north of borough limits; 445,000 gallon reservoir on mountainside northeast of and 135 feet above center of borough; watershed area 400 acres, owned by company. At head of run a large spring, impounded, feeds reservoir by 4-inch line 1,800 feet long; two springs on north bank flow directly into reservoir.

(2) Cobb Hollow Run, tributary of Allegheny River from west, opposite Rees Hollow Run. Intake forming 20,000 gallon reservoir in narrow valley northwest of borough, fed by spring in bottom and by one 150 feet northwest, water flowing over ground.

(3) Two Kernan springs on hillside in eastern part of borough.

(4) Niles Hill Hollow Run, tributary of Allegheny River from west, in borough; dam forming 3,000,000 gallon reservoir northwest part of borough, elevation 245 feet above center of borough. Short distance below, a 4-inch line from three springs collected in sandstone pockets; line connected to 8-inch gravity main from reservoir.

(5) Pumping station 0.5 mile south of center of borough; 6-inch suction line 1,600 feet to receiving basin northeast of station, capacity 45,000 gallons, fed by 6-inch line from Spafford Spring 0.5 mile east. This line also receives flow from Fee Spring, 300 feet west of Spafford Spring, and another spring still further west. Pumping equipment Gould triplex pump, capacity 300,000 gallons daily, belt-connected to 25 hp. Struthers Wells gas engine. Water very soft.

DISTRIBUTION

From (1) by gravity through 6-inch main 4,000 feet to distributing system in extreme northern end of Main Street; with (2) forms ordinary supply to borough. Pressure 50 pounds.

From (2) by gravity through 3-inch main 2,500 feet to junction with 6-inch main from Rees Hollow reservoir.

From (3) by gravity through 3-inch line to distributing system at extreme north end of Seventh Street.

From (4) by gravity through 8-inch line 2,200 feet to distributing system at north end of Main Street; held in reserve for fire purposes; increases pressure to 105 pounds. Flow controlled by gate valves electrically operated from center of borough.

(5) Old supply of East Coudersport Water Co. held in reserve for droughts. Can pump directly into system or through 8-inch force main 1,500 feet southwest to storage reservoir on hill, capacity 55,000 gallons. Distributing mains 14 miles; 63 fire hydrants, 6-inch.

CONSUMPTION

Supply to 2,900 people; 520 taps. Stated daily consumption 200,000 gallons. No means of measurement. Also supplies Coudersport and Port Allegany R. R.

INDUSTRIAL

All manufacturing plants have private water systems.

Elk Tanning Co. has five springs and two ponds, using total of 300,000 gallons daily. Industrial supply obtained by gravity and by pumping through 3 and 4-inch pipes; domestic by gravity and by pumping through 1-inch pipe; 100 people supplied.

CROSBY (NORWICH TWP.), McKEAN COUNTY

PRIVATE SUPPLY

Estimated population 1915, 250a

LOCATION

Southeastern McKean County, on Potato Creek; on Clermont Branch, Northern Division, Pennsylvania R. R.

INDUSTRIES

Plant of Heinemann Chemical Co.

WATER SUPPLY

Private system of Chemical Co., called Crosby Water Co., installed 1905.

SOURCE AND COLLECTION

Spring 0.5 mile southeast of village; 4,500 gallon reservoir built over it; reported flow 72,000 gallons daily in dry season. Water soft.

DISTRIBUTION

By gravity through 4-inch main, reducing to 3-inch and 2-inch. A 2-inch line to chemical plant overflows continually into tank; pressure 20 pounds.

CONSUMPTION

Supply to 200 people; 31 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 6,000 gallons daily, all domestic. Stated industrial consumption 1,280,000 gallons daily, from separate industrial system.

CUSTER CITY (BRADFORD TWP.), McKEAN COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 300b

LOCATION

North central McKean County, on Tuneungwant Creek; on Erie R. R., Buffalo, Rochester & Pittsburgh R. R., and Western New York & Pennsylvania Traction line.

INDUSTRIES

Hillside Oil Co.

WATER SUPPLY

Private system of Hillside Oil Co., installed 1904.

SOURCE AND COLLECTION

Spring on hillside west of village; water collected in small reservoir. Flow decreases considerably during dry seasons.

DISTRIBUTION

By gravity through 1½-inch line.

CONSUMPTION

Supply to 50 people; 10 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 1,500 gallons daily, domestic; small amount to 40 hp. boilers of Oil Co.

EDINBORO BOROUGH, ERIE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 666; decrease since 1900, 25. Estimated 1915, 800a

LOCATION

South central Erie County, on both sides Conneaut Creek, tributary of French Creek; on Erie traction line; nearest railroad station Cambridge Springs, on Erie R. R. Built-up portion on slightly rolling table-land around southern end of Conneaut Lake.

INDUSTRIES

Agriculture. Seat of State Normal School.

WATER SUPPLY

Municipal works built in 1910.
Private system, State Normal School.

MUNICIPAL WATER WORKS

SOURCE AND COLLECTION

Dug well, 15 feet diameter, 18 feet deep, in south central part of borough, 40 feet from west bank of creek and 400 feet below grist mill dam across creek at outlet of lake. Water pumped by Deane triplex pump connected to 18 hp. Olin gasoline engine; 8-inch force main, 1,700 feet long; pumping equipment in duplicate for emergencies. Hypochlorite treatment of water at pumps. Water medium hard.

DISTRIBUTION

By pumping direct to system with 8-inch connection to 60,000 gallon equalizing standpipe 75 feet above borough and 1,700 feet west of pumping station. Distributing mains 2.7 miles 4-inch to 8-inch; 37 fire hydrants.

CONSUMPTION

Supply to 500 people; 150 taps, 12 metered. Average daily consumption 40,000 gallons, all domestic, measured by pump displacement.

COST AND REVENUE

Total cost of works, $22,000; annual operating expenses, $600; gross revenue, $1,200.

STATE NORMAL SCHOOL SYSTEM.

SOURCE AND COLLECTION

Three drilled wells, 40 feet deep; water raised by two Marsh deep well pumps to 15,000 gallon tank 50 feet above wells; 2-inch pipe to buildings.

CONSUMPTION

Supply to 400 people. Average daily consumption 20,000 gallons, all domestic, measured by pump displacement.

ELDRED BOROUGH, McKEAN COUNTY

GALETON-ELDRED WATER COMPANY

Population 1910 census, 1,235; increase since 1900, 272. Estimated 1915, 1,700

LOCATION

Northeastern McKean County, on east bank of Allegheny River; on Western New York & Pennsylvania R. R.

INDUSTRIES

Oil products, cutlery works, glass works, hardwood factory and tannery; farming in adjacent country.

WATER SUPPLY

Original supply by Eldred Water Co., incorporated 1899; company sold to Pike Mills Water Co. of Potter County in 1906 and shortly afterwards the two charters combined under name of Galeton-Eldred Water Co. (See Galeton, Section No. 7.)

SOURCE AND COLLECTION

(1) Three springs near headwaters of south branch of Barden Brook, about 4 miles east of borough. Reservoirs built over two of these springs, of 225,000 and 160,000 gallons capacity; other spring in pocket 1,500 gallons capacity. Supply from springs sufficient in dry seasons. Water soft.

(2) Drilled well 75 feet deep, in borough and 500 feet from Main Street, auxiliary in dry seasons; water pumped by 72,000 gallon pump 425 feet to distributing system on Railroad Street.

DISTRIBUTION

By gravity through 6-inch pipe from reservoirs and 4-inch from spring pocket combined into one 6-inch line to borough; pressures 95 to 100 pounds; 7 miles distributing mains; 30 fire hydrants, 4-inch and 6-inch.

CONSUMPTION

Supply to 1,700 people; 350 taps. Stated consumption 209,000 gallons daily, all domestic. No means of measurement.

EMLENTON BOROUGH, VENANGO COUNTY

EMLENTON WATER COMPANY

Population 1910 census, 1,100; decrease since 1900, 80. Estimated 1915, 1,110a

LOCATION

Southeastern corner of Venango County, on east bank of Allegheny River; on Northern Division, Pennsylvania R. R. Built-up portion partly on slope of mountain and partly on flats between foot of mountain and river; mountains 600 feet high.

INDUSTRIES

Agriculture; large oil refinery, several machine shops.

WATER SUPPLY

Emlenton Water Co., incorporated 1879 for Emlenton Borough.

SOURCE AND COLLECTION

Allegheny River. Pumping station at foot of Eighth Street in borough, containing 432,000 gallon triplex pump, belt-connected to 60 hp. tubular boiler, a duplex steam pump for emergencies, and a 432,000 gallon centrifugal pump connected to gas engine; 8-inch intake 265 feet to filter crib in center of river. Centrifugal pump lifts water to 37,800 gallon settling tank whence it flows through two 216,000 gallon mechanical filter units to 10,300 gallon clear water well. Triplex pump with 8-inch force main 200 feet, reducing to 6-inch for 2,500 feet, pumps to distributing reservoir, capacity 230,-300 gallons, 380 feet above borough.

DISTRIBUTION

By gravity through 8-inch main; pressures 8 to 145 pounds. Distributing mains as follows

Size (inches),	6	4	3	1 and 2	Total
Length (miles),	1.1	2.0	1.1	0.2	4.4

Twenty-five fire hydrants, 3-inch.

CONSUMPTION

Supply to 1,000 persons; 285 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 30,000 gallons daily, domestic; probably 20,000 gallons daily, industrial.

INDUSTRIAL

Emlenton Refining Co. has private system, using filter crib in Allegheny River.

FOXBURG VILLAGE (RICHLAND TWP.), CLARION COUNTY

FOXBURG WATER WORKS COMPANY

Estimated 1915 population, 650a

LOCATION

Northwestern Clarion County, along east bank of Allegheny River; on Northern and Buffalo Divisions of Pennsylvania R. R.

INDUSTRIES

Oil production; railroad shops.

WATER SUPPLY

Foxburg Water Works Co., incorporated 1878 for village of Foxburg.

SOURCE AND COLLECTION

Four drilled wells just east of village; three 150 feet deep and one 135 feet deep; casings 4-inch for three and 4¼-inch for other. Water pumped by two 24,000 gallon oil well pumps connected to a 13 hp. Foos gas engine; 2-inch discharges into single 3-inch line to 393,000 gallon reservoir nearby. Water soft.

DISTRIBUTION

By gravity through 4-inch main, 4-inch and 3-inch laterals; pressures 50 to 90 pounds; 9 fire hydrants, 3-inch.

CONSUMPTION

Supply to 650 people; 115 taps. Average daily consumption 40,000 gallons, all domestic, measured by pump displacement.

FRANKLIN, VENANGO COUNTY

MUNICIPAL WATER WORKS
PRIVATE SUPPLY

Population 1910 census, 9,767; increase since 1900, 450. Estimated 1915 population, 11,059 (U. S. Census)

LOCATION

County seat, central Venango County, along banks of French Creek and west bank of Allegheny River at junction; on Allegheny, Buffalo and Northern Divisions of Pennsylvania R. R., Erie R. R. and Lake Shore & Michigan Southern R. R.; connected with Oil City by Citizens traction line.

INDUSTRIES

Oil producing and refining territory; steel works, foundry, pneumatic tool works, rolling mill, manifold works, brass foundry, manufacture of oil well machinery and supplies, railway supplies factory, machine shops and flour mills.

WATER SUPPLY

Municipal works installed 1866 by Venango Water Co., incorporated 1863; purchased by city in 1908.

Private system of Hill Spring Water Co., an unincorporated company, works installed about 1874; owned and operated by several owners of property on hillside in western part of city, south of French Creek, near junction with Allegheny River.

MUNICIPAL WATER WORKS

SOURCE AND COLLECTION

Fourteen drilled wells, five not being used at present; emergency supply from French Creek; springs. Water medium hard.

(1) Drilled wells, averaging 84 feet in depth, east and west of pumping station, 1.25 miles west of city, on south bank of French Creek; connected to 14-inch suction line by 6-inch and 8-inch pipe. Pumping equipment two 720,000 gallon Worthington pumps, one 1,500,000 gallon Worthington, one 3,000,000 gallon Prescott triplex, one 2,000,000 gallon centrifugal pump and two 150 hp. tubular boilers.

When French Creek water is used centrifugal pump, with 8-inch suction in creek, lifts water through 8-inch force main to two 85,000 gallon settling tanks, from which water flows through four 500,000 gallon slow sand filter beds to 144,000 gallon clear water well which has connection to Worthington pumps.

New wells drilled near junction of Sugar and French creeks, 1.75 miles northeast of city. Water from 12-inch well No. 3, 52 feet deep, siphoned through 12-inch line 8,900 feet to clear water well in pumping station. Difference in elevation 30 feet. Well No. 2, 8-inch diameter and 48 feet deep, held in reserve. Well No. 1 abandoned because of pollution.

(2) Four springs in vicinity of Gurney Run, tributary of French Creek, rising southwest of city. (a) Gurney Run, about 1 mile above mouth and west of city; 5-inch line northeast, enlarging to 6-inch and then to 8-inch, to 165,000 gallon iron tank on hilltop just south of French Creek and west of city. Four-inch overflow to another 165,000 gallon tank east of first and just within city limits. (b) Latter tank fed by spring nearby and also by two others, the most distant being about 1 mile south, along Gurney Run and feeding through 6-inch line.

(3) Springs on Smith's Run just north of city limits and below 11,000,000 gallon abandoned reservoir of old Venango Water Co. One spring has 3-inch line, one 2-inch line and one 4-inch line to 8-inch main from old reservoir, water from latter being shut off.

(4) Separate system directly across Allegheny River from city in Cranberry Township, known as the Valley Section.

DISTRIBUTION

Two services, high and low; pressures 60 to 110 pounds.

(1) Low service, supplied by 12-inch force main from large Worthington pump, to northern part and across French Creek to main section of city. High service, supplied by 10-inch force main from small Worthington pump, to 360,000 gallon tank on hilltop in northwestern corner of city; called main high pressure system. An 8-inch main from 10-inch supplies northernmost section, with connection to 5,000 gallon tank near northern boundary for supply of Prospect Park, outside of city.

(2) Supplies western part of city by laterals to line from springs to tanks, a high service system.

From (3) by gravity through 8-inch line, enlarging to 10-inch, supplying southern section of city; also connected to low pressure pumping line.

From (4) by gravity through 4-inch line from lower reservoir. Sixty miles of distributing mains, 2-inch to 12-inch; 85 fire hydrants 30% 4-inch and 70% 6-inch.

CONSUMPTION

Supply to 11,200 persons in city and 800 outside; 2,700 taps, 222 are outside of city; 60 metered industrial taps. Average daily consumption, pumping system, 1,510,000 gallons, 80% domestic and 20% industrial, measured by pump displacement; gravity system 80,000 gallons, all domestic.

HILL SPRING WATER COMPANY SYSTEM

SOURCE AND COLLECTION

Several springs 200 to 300 feet above houses, collected in catch basin with 3-inch line to 10,000 gallon reservoir; flow reported 5,000 gallons daily in ordinary periods and 1,000 during droughts.

DISTRIBUTION

By gravity through 2-inch line; pressures 45 to 90 pounds.

CONSUMPTION

Supply to 100 persons, 23 taps, of which 20 houses belong to owners of system. Stated average daily consumption, 3,000 gallons, all domestic. No means of measurement.

GRAND VALLEY BOROUGH, WARREN COUNTY

PRIVATE SUPPLY

Population 1910 census, 290; decrease since 1900, 98. Estimated 1915, 300a

LOCATION

Southwestern Warren County, on East Branch Caldwell Creek; on New York Central & Hudson River R. R.

INDUSTRIES

Agriculture; creamery and grist mill.

WATER SUPPLY

Small private system owned by Leroy C. Allen; installed 1884.

SOURCE AND COLLECTION

Two small springs, on hillside west of borough, collected in 15,000 gallon reservoir. Water soft.

DISTRIBUTION

By gravity through 4-inch pipe; pressures 15 to 40 pounds; 2 miles distributing mains, 2-inch and 4-inch; no fire hydrants.

CONSUMPTION

Supply to 150 people; 30 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 4,500 gallons, all domestic.

HAZELHURST (HAMLIN TWP.), McKEAN COUNTY

HAZELHURST WATER COMPANY
(H. E. Ahrens and others)

Estimated 1915 population, 1,600a

LOCATION

Central southern McKean County, near headwaters of Marvin Creek; on Pittsburgh, Shawmut & Northern R. R.; in valley surrounded by high hills; range of elevation 50 feet.

INDUSTRIES

Glass bottle works and machine blower glass works.

WATER SUPPLY

Hazelhurst Water Co., incorporated 1898 for village of Hazelhurst and vicinity; owned by H. E. Ahrens and others.

SOURCE AND COLLECTION

(1) Two branches of Fletcher Brook, tributary of Marvin Creek; 120,000 gallon reservoir at headwaters of one branch and 50,000 gallon reservoir at headwaters of other branch; combined watershed area 3 square miles.

(2) Springs 300 feet below larger reservoir; 4-inch gravity line to 8,000 gallon wooden tank.

(3) Sherman Run, tributary of Marvin Creek; intake dam 1 mile southwest of village; watershed area about 1.5 square miles.

DISTRIBUTION

From (1) by gravity through 2,900 feet of 6-inch line from larger reservoir, receiving 6-inch gravity line, 430 feet long, from smaller reservoir.

From (2) by gravity through 4-inch line to gravity main from reservoir.

From (3) by gravity through 4-inch main 5,325 feet long.

Pressures 30 to 60 pounds; 3 miles distributing mains, 1-inch to 6-inch; 19 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,600 people; 230 taps. Stated average consumption 50,000 gallons daily, 75% domestic and 25% industrial. No means of measuring. Drinking water supply to glass plants.

JAMES CITY (HIGHLAND TWP.), ELK COUNTY

CRYSTAL SPRINGS PARK WATER COMPANY

Estimated 1915 population, 500

LOCATION

Extreme northwestern Elk County, just south of McKean County line, at headwaters of Tionesta Creek; on Kane & Elk R. R. Built-up portion on hill-top at elevation 2,180.

INDUSTRIES

In Kane oil and gas fields; James Bros. Lumber Co. and American Plate Glass Co.

WATER SUPPLY

Crystal Springs Park Water Co., incorporated 1907 for Highland Township; Hamlin Bank and Trust Co., receiver; owned and controlled by principal stockholders of American Plate Glass Co.

SOURCE AND COLLECTION

(1) Wind Run, tributary of East Branch Tionesta Creek; 34,000,000 gallon storage reservoir 0.33 mile north of village; water shed area 3 square miles. Pumping station on south bank of reservoir having two 1,000,000 gallon Platt triplex pumps, one belt-connected to 100 hp. G. E. motor, and other to 100 hp. Struthers Wells gas engine operated by natural gas. A 10-inch suction and 10-inch force main 1,600 feet to two storage and distributing tanks, combined capacity 60,000 gallons, at glass plant and 240 feet above pumps.

(2) Three drilled wells on north bank and seven on south bank of reservoir, 5⅝-inch diameter, depths from 143 to 248 feet; used as auxiliary supply; reported capacity 1,500,000 gallons daily. Water raised to reservoir by Ingersoll-Rand air compressor connected to 150 hp. G. E. motor.

DISTRIBUTION

By gravity through 8-inch main to glass company, pressure 30 pounds; 6-inch main to village, pressure 20 pounds. Fire pressure 125 pounds by fire pumps; two fire hydrants at glass plant.

CONSUMPTION

Supply to practically entire population; 75 taps. Total average daily consumption 2,000,000 gallons, measured by pump displacement.

KANE BOROUGH, McKEAN COUNTY

THE SPRING WATER COMPANY OF KANE

Population 1910 census, 6,626; increase since 1910, 1,330. Estimated 1915, 7,500a

LOCATION

Southwestern McKean County, at high elevation north of headwaters of East Branch of Tionesta Creek, and south of headwaters

of branch of Kinzua Creek; on Pennsylvania R. R., Baltimore & Ohio R. R., and terminus of Kane & Elk R. R. Range of elevation in built-up section 320 to 550.

INDUSTRIES

Oil, gas and agricultural country; three window glass plants, three brush handle factories, foundry and machine shop, milk bottle factory, blind and screen factory.

WATER SUPPLY

The Spring Water Co. of Kane, incorporated 1887 for Kane and vicinity.

SOURCE AND COLLECTION

(1) Separate system for supply to Pennsylvania R. R. Hubert Run, tributary of branch of Kinzua Creek; No. 2 storage reservoir 1 mile north of borough, capacity 700,000 gallons; watershed area about 3 square miles. Drilled well No. 10 used as auxiliary, 900 feet east of pumping station, near reservoir; water pumped by air to Hubert Run. One pump, with one in reserve, having 6-inch suction in reservoir, pumps water through 6-inch force main 5,500 feet to railroad supply; gated connections to borough system have never been used. Reservoir No. 1 can be used to augment supply of No. 10 well.

(2) Reservoir No. 1, adjacent to reservoir No. 2, and 9 feet higher, near pumping station; capacity 600,000 gallons. Receives 6-inch line from 30,000 gallon reservoir No. 4 on spring run 500 feet south; 8-inch tile pipe from several springs 100 to 400 feet east; 8-inch pipe line from reservoir No. 3, 900 feet east, fed by 2,400 feet of 8-inch tile pipe from 20,000 gallon collecting reservoir at several springs; flow augmented by drilled wells Nos. 5, 8, 9, 17 and 18; receives also water from drilled wells Nos. 1, 2, 3, 4, 6, 7, 11, 12, 13, 14, 15 and 16. Pumps have 12-inch suction in reservoir and two 10-inch force mains direct to borough system. Well water medium hard and spring water soft.

Pumping equipment: One Ingersoll-Rand air compressor, steam; one Hall straight line compressor, steam; one Ingersoll-Rand air compressor, direct-connected to 125 hp. gas engine; two Struthers Wells steam boilers, 100 hp.; one Platt triplex pump with 135 hp. gas engine, capacity 1,000,000 gallons; one Worthington duplex (auxiliary) steam, capacity 600,000 gallons; one Deane pump (new) Alberger 125 hp. gas engine, capacity 1,000,000 gallons; one Deane triplex, Alberger 80 hp. gas engine, capacity 500,000 gallons.

Wells as follows:

No.	Diameter	Depth	Location	Supply
	Inches	Feet		
1	[illegible]	264	Just below Reservoir No. 1,	To Reservoir No. 1
2	[illegible]	276	600 feet east of Reservoir No. 1,	6-inch pipe to Reservoir No. 1
3	[illegible]	200	700 feet east of Reservoir No. 1,	6-inch pipe to Reservoir No. 1
4	[illegible]	250	200 feet from Reservoir No. 4,	To Reservoir No. 1
5	[illegible]	294	800 feet east of Reservoir No. 3,	To Reservoir No. 3
6	[illegible]	266	150 feet north of Reservoir No. 1,	To Reservoir No. 1
7	[illegible]	246	30 feet from Reservoir No. 4,	To Reservoir No. 1
[illegible]	[illegible]	317	1,500 feet east of Reservoir No. 3,	To Reservoir No. 3
9	[illegible]	318	1,500 feet east of Reservoir No. 3,	To Reservoir No. 3
10	[illegible]	267	900 feet east of pump station,	To Hubert Run for Res. No. 2
11	[illegible]	202	300 feet north of Reservoir No. 1,	To Reservoir No. 1
12	[illegible]	251	Near pump station,	To Reservoir No. 1
13	[illegible]	263	Near pump station,	To Reservoir No. 1
14	[illegible]	268	Near pump station,	To Reservoir No. 1
15	[illegible]	274		To Reservoir No. 1
16	[illegible]	318		To Reservoir No. 1
17	[illegible]	297		To Reservoir No. 3
18	[illegible]	307		To Reservoir No. 3

DISTRIBUTION

By pumping direct to distributing system through two 10-inch lines; standpipe 16 feet in diameter and 100 feet high, capacity 150,000 gallons, in extreme southeastern part of borough, having 8-inch connection to system used as equalizer and for fire protection; pressures 40 to 125 pounds.

Distributing mains, including delivery mains:

Size (inches),	10	8	6	4	Smaller than 4	Total
Length (miles),	2.0	1.2	3.8	7.2	3.8	18.0
Per cent.,	11	7	21	40	21	100

Seventy fire hydrants, 4-inch, owned by borough.

CONSUMPTION

Supply to 7,500 people; 1,400 taps, 14 industrial; 900 metered; 24 outside borough. Stated average daily consumption 1,000,000 gallons, 56% domestic and 44% industrial. No means of measurement. Supplies 307,000 gallons to railroad tanks and shops.

LUDLOW (HAMILTON TWP.), McKEAN COUNTY

PRIVATE SUPPLIES

Estimated 1915 population, 1,200a

LOCATION

Southwestern McKean County, along both banks of Two Mile Run; on Philadelphia & Erie Division of Pennsylvania R. R. Built-up portion mostly north of stream, on ground rising gradually to foot of a series of ridges.

INDUSTRIES

J. G. Curtis Leather Co. plant.

WATER SUPPLY

Private system of Leather Co., built 1898. Private system of J. G. Curtis, built 1885. Private system of Ludlow Real Estate Co., built 1904.

J. G. CURTIS LEATHER COMPANY SYSTEM

SOURCE AND COLLECTION

(1) Three springs; largest near top of hill, 3,600 feet north of tannery, at elevation 195 feet above creek; two others on hillside 1,500 feet northeast of tannery. Two gravity mains from large spring and 2-inch mains from small springs into two 250,000 gallon tanks 1,250 feet northeast of tannery.

(2) Four springs; one called County Line Spring, on hillside 4,800 feet northwest of village; other three 3,600 feet northeast of village. From latter a 2-inch gravity line, southwest 3,200 feet to junction with 4-inch main 3,500 feet long, from County Line Spring, continuing as 4-inch 2,400 feet to receiving basin 500 feet southwest of two storage tanks of (1). Water raised from basin by centrifugal pump with 3-inch force main to storage tanks. Two 4-inch drilled wells near tannery used for auxiliary supply in dry season for industrial purposes; not connected to domestic supply.

DISTRIBUTION

By gravity through 8-inch main. About 1 mile of 1-inch and 2-inch distributing mains.

CONSUMPTION

Supply to about 170 people; 34 taps. Stated consumption 40,000 gallons daily, 8,000 domestic and 32,000 industrial used by tannery. No means of measurement.

INDUSTRIAL SUPPLY

SOURCE AND COLLECTION

Two Mile Run and a small tributary; 500 g. p. m. Snow pump has 6-inch suction in Two Mile Run, and 5-inch discharge to beam house; 200 g. p. m. Snow pump has 4-inch suction in Two Mile Run and 3-inch discharge to tannery for general use; electrically operated centrifugal pump has 4-inch suction in Two Mile Run and 3-inch discharge to dye house and tank.

A 4-inch gravity line from small tributary of Two Mile Run 250 feet to tannery for general use.

Water from a 6-inch well and two 8-inch drilled wells, 112 to 133 feet deep, in beam house pumped by three Deming electric pumps through 4-inch force mains to vats.

Fire protection furnished by separate system supplied by 750 g. p. m. Knowles pump with 10-inch suction in Two Mile Run and 8-inch force main to six fire hydrants.

CONSUMPTION

Stated average daily consumption 500,000 gallons, all industrial. No means of measurement.

SYSTEM OF J. G. CURTIS

SOURCE AND COLLECTION

Two springs on hillside in northeastern part of village, water collected and delivered by two 2-inch gravity lines.

CONSUMPTION

Supply to about 300 people; 60 taps. System installed by Mr. Curtis for use of employees of leather company; no charges for its use.

SYSTEM OF LUDLOW REAL ESTATE COMPANY

Two springs near foot of hills, 600 feet from eastern part of village; water delivered through 2-inch gravity pipe to 25 houses; supplied free of charge.

MEADVILLE AND KERRTOWN (VERNON TWP.), CRAWFORD COUNTY

MUNICIPAL WATER WORKS

	Population 1910 census	Increase since 1900	Estimated 1915
Meadville,	12,780	2,489	13,637x
Kerrtown,			500

LOCATION

County seat, central Crawford County, on French Creek; on Erie R. R., Bessemer & Lake Erie R. R., Meadville & Cambridge Springs Street Ry. and Northwestern Pennsylvania Electric Ry.

INDUSTRIES

Phoenix iron works, malleable iron works, boiler works, vise manufacturing plant, machine tool works, Erie R. R. shops, distillery and brewery, corset company, tool works, three lumber companies, saw mills and grist mill.

WATER SUPPLY

Municipal works purchased by city 1898 from The Meadville Water Co., incorporated 1875 for Meadville.

SOURCE AND COLLECTION

Twenty-four drilled wells, averaging 60 feet deep, about 0.5 mile northwest of city. Pumping station near wells contains one 4,000,000 gallon Worthington and one 3,000,000 gallon Epping-Carpenter pump, with 18-inch suction line connected by 4-inch branches to wells; 20-inch force main 1.9 miles long to 4,000,000 gallon reservoir in northeastern corner of city. Water medium hard.

DISTRIBUTION

By gravity from distributing reservoir through 12-inch and 10-inch lines; pressures 22 to 115 pounds; 35 miles distributing mains; 187 fire hydrants, 6-inch.

CONSUMPTION

Supply to 14,000 people; 2,977 taps; 2,074 meters, including village of Kerrtown, on West bank of French Creek, opposite southern end

of city, and a few taps west and north of city. Stated average daily consumption 1,750,000 gallons, measured by pump displacement. Engines and shops of Erie R. R. supplied.

COST AND REVENUE

Total cost of works, $300,000; annual operating expenses, about $17,000; annual gross revenue, about $44,000.

MT. JEWETT BOROUGH, McKEAN COUNTY

MT. JEWETT WATER COMPANY

Population 1910 census, 1,771; increase since 1900, 218. Estimated 1915, 1,750

LOCATION

South central McKean County, at high elevation north of headwaters of Marvin Creek; on Buffalo, Rochester & Pittsburgh R. R. and Erie Ry.; terminus of Mt. Jewett, Kinzua & Riterville R. R. and of Big Level & Kinzua Branch of Baltimore & Ohio R. R.

INDUSTRIES

Agriculture and oil production; window glass plant, tannery, sled factory and scale works.

WATER SUPPLY

Mount Jewett Water Co., incorporated 1890 for Hamlin Township; works installed 1894.

SOURCE AND COLLECTION

(1) Springs on east hillside of Head Run, tributary of Marvin Creek, 2 miles southeast of center of borough; water flows down hillside, collected in ditch leading to catch basin with wooden trough to 41,000 gallon tank, on each bank of Head Creek, directly opposite pumping station on west bank. Pumping equipment 200,000 gallon Deane connected to 80 hp. Alberger gas engine; Snow duplex pump, capacity 500,000 gallons daily, as reserve unit; 6-inch force main to system. Water soft.

(2) Auxiliary emergency supply from four drilled wells, three 100 feet deep and one 65 feet deep, just west of pumping station; water

raised by 50 hp. air compressor into storage tank at pumping station. Water medium hard.

DISTRIBUTION

By pumping direct to system with 6-inch connection to three 41,-200 gallon wooden tanks, on hill; another tank, capacity 41,200 gallons, at tannery, supplied by water company. Tannery also obtains private supply for general purposes by pumping from drilled wells; can connect its system to that of water company to furnish pressure of 100 pounds for emergency fire protection. Pressure 70 pounds; 5 miles distributing mains, 3-inch to 6-inch; 32 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,750 people; 275 taps, 187 meters. Stated average daily consumption 125,000 gallons, 25% domestic and 75% industrial, measured by pump displacement. Metered consumption 35,000 gallons industrial and 15,000 gallons domestic. Supplies 9,000 gallons daily to tank of Big Level & Kinzua R. R., 1,000 feet west of station, 15,000 gallons daily to window glass plant and 12,000 gallons to tannery. Reported consumption shows large loss, probably by leakage.

INDUSTRIAL SUPPLY

Consolidated Window Glass Co., has private supply, using drilled wells at plant in eastern part of borough. Water pumped by electrically operated pumps through 3-inch force main to tank; pressure 20 pounds. Larger pump in reserve for fire protection. Stated average daily consumption 21,000 gallons, in addition to that furnished by water company.

NORTH WARREN (CONEWANGO TWP.), WARREN COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 2,000

LOCATION

Eastern central Warren County, Conewango Township on Conewango Creek; on New York Central R. R. and Warren & Jamestown Street Railway.

INDUSTRIES

Suburban residential district; piano factory. State Hospital for Insane just north of village, extending 2 miles along banks of creek.

WATER SUPPLY

Private system of E. T. Hazeltine, built 1902.

State Hospital has private system; creek used from 1880 to 1882.

E. T. HAZELTINE SYSTEM

SOURCE AND COLLECTION

Pumping plant at factory of Bashlin Co., near Conewango Creek; one triplex pump, capacity 57,600 gallons daily; 2-inch suction in creek and 2-inch force main direct to distributing system.

DISTRIBUTION

Excess water backs up into two tanks, capacity 3,000 gallons each; pressure 80 pounds.

CONSUMPTION

Supply to 60 people, Bashlin Co. and Bennett Piano Co. Stated consumption 3,000 gallons daily, all domestic.

SYSTEM OF STATE HOSPITAL FOR INSANE

SOURCE AND COLLECTION

Five drilled wells, 70 feet deep, near bank of creek and just northeast of main building. Pumping equipment two 1,400,000 gallon Gould pumps direct-connected to 100 hp. gas engines. An 8-inch force main to two circular reservoirs, capacity 700,000 and 436,000 gallons, on hillside 0.25 mile west of main buildings. Water pumped direct to system during day; gravity at night. Water medium hard.

DISTRIBUTION

By gravity and pumping; pressures 60 to 80 pounds, 125 pounds for fires; 5 miles distributing mains, 2-inch to 8-inch; 21 fire hydrants, 6-inch.

CONSUMPTION

Supply to 1,800 inmates and employees. Average daily consumption 530,000 gallons, all domestic, measured by pump displacement.

OIL CITY, VENANGO COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 15,657; increase since 1900, 2,393. Estimated 1915 population, 18,971x

LOCATION

Northern central Venango County, along banks of Oil Creek and Allegheny River at junction; on Pennsylvania R. R., Erie R. R., and Lake Shore & Michigan Southern R. R.; connected with Franklin City by Citizens traction line. Built-up section very hilly, business portion being in narrow valley at confluence of Oil Creek and Allegheny River.

INDUSTRIES

Production and refining of oil; barrel works, boiler works, oil well supply manufacturing companies, machinery and pump factories, gas engine works, wagon works, foundry, book company, planing mills, woodworking shops, three milling companies and railroad shops.

WATER SUPPLY

Municipal plant installed 1873, replacing several small private systems.

SOURCE AND COLLECTION

Sixteen drilled wells, a settling well which adds largely to supply, a spring and an emergency intake in Allegheny River. Water soft.

Drilled wells just across river from city limits, on south bank of Allegheny River, average 12-inches diameter and 50 feet in depth; pipe lines from below water line of each well to 12-inch main leading to settling well nearby, from which 24-inch siphon line leads 5,250 feet to two intake wells at pumping station.

Pumping station equipment one 3,000,000 gallon Barr pump, one National Transit pump of same capacity, one 1,000,000 gallon National Transit Co. triplex pump, and one high service emergency pump of capacity 500,000 gallons daily. A 24-inch emergency intake in Allegheny River opposite pumping station.

DISTRIBUTION

Two services, high and low, which may be connected at numerous points if necessary.

(1) Low service system; two 12-inch force mains from pumping station 850 feet east to 3,000,000 gallon reservoir; two 12-inch gravity mains from reservoir, one across Allegheny River to eastern portion of city and the other into southern portion. Water from McLaughlin spring near eastern limits of city piped through 4-inch main to distributing system. Pressures 60 to 125 pounds.

Pumping station near summit of low service district pumps water to 23,700 gallon standpipe for supply of small residence section, isolated from high service district. Pumping equipment 7½ hp. duplex pump connected to electric motor.

(2) High service system; two 8-inch force mains from pumping station, total length 14,825 feet, one crossing Allegheny River north through hill section to two 333,000 gallon tanks in northeastern part of city; other along south bank of Allegheny River to city limits, where it branches into two 8-inch lines. One of these branches leads west to a hill section of city and then south to 135,000 gallon reservoir on hilltop just south of city limits; other branch line across Allegheny River leading northward, parallel to high service line to two tanks in northwestern corner of city. Pressures 60 to 175 pounds.

Distributing mains as follows:

						Less than	
Size (inches),	12	10	8	6	4	4	Total
Length (miles),	2.9	0.2	4.3	24.0	5.9	0.4	37.8
Per cent.,	8	1	11	63	16	1	100

Two hundred and eighty-seven fire hydrants, one 6-inch, remainder 4-inch.

CONSUMPTION

Supply to 19,000 people; 3,300 taps, all metered; 19 north of city, 18 east, 25 south, and 48 industrial. Average daily consumption 2,000,000 gallons, 34.6% domestic, 7.5% industrial, 7% for city use and 50.9% unaccounted for. Supplies 51,000 gallons daily to Pennsylvania R. R., 30,000 gallons to Lake Shore & Michigan Southern R. R., 26,800 gallons to National Transit Co. and 11,000 gallons to Erie R. R.

COST AND REVENUE

Total cost of works, $510,000; annual operating expense, $25,000; gross revenue, $45,000.

OSWAYO BOROUGH, POTTER COUNTY

OSWAYO WATER COMPANY

Population 1910 census, 382, incorporated in 1901. Estimated 1915, 250a

LOCATION

Northwestern Potter County, on Oswayo Creek, which joins Allegheny River in New York State; on New York & Pennsylvania R. R.

INDUSTRIES

Agriculture; grist mill.

WATER SUPPLY

Oswayo Water Co., incorporated 1901 for Oswayo Borough; supplying since 1904.

SOURCE AND COLLECTION

(1) Three springs 0.75 mile north of center of borough; water piped through 1½-inch pipes to 8,000 gallon reservoir nearby.

(2) Three springs 0.5 mile south of center of borough, 5,000 gallon reservoir over one; others piped to it. Water soft.

DISTRIBUTION

By gravity through 2-inch line from each reservoir; pressures 40 to 60 pounds. Distributing pipe 0.75 mile 2-inch and 0.2 mile 4-inch; 3 fire hydrants.

CONSUMPTION

Supply to 200 people; 40 taps. No means of measuring consumption; assuming 20 gallons per capita, would be 4,000 gallons daily, all domestic.

PLEASANTVILLE BOROUGH, VENANGO COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 702; increase since 1900, 31. Estimated 1915, 725a

LOCATION

Northeastern corner Venango County, at headwaters of tributaries of Oil Creek and Allegheny River; on Titusville Electric Traction Co.'s road.

INDUSTRIES

Oil and gas producing district; agriculture.

WATER SUPPLY

Municipal plant installed in 1909.

SOURCE AND COLLECTION

Three drilled wells averaging 110 feet deep and three averaging 300 feet deep, in eastern part of borough; water pumped by old style oil well pumps to 700 gallon cistern nearby, whence 95,000 gallon Gould triplex connected to 20 hp. gas engine forces it through 6-inch line 1,500 feet to distributing system. Water in shallow wells soft, flow decreases in summer; that in deeper wells medium hard, flow uniform.

DISTRIBUTION

By pumping direct to system with 6-inch connection to 41,000 gallon equalizing tank; pressures 50 to 75 pounds; 4 miles distributing mains, 2-inch to 6-inch; 31 fire hydrants, 2-inch and 4-inch.

CONSUMPTION

Supply to 500 people; 135 taps. Stated average daily consumption 50,000 gallons, all domestic; measured by pump displacement.

COST AND REVENUE

Total cost of works, $17,000; annual operating expenses, $800; gross revenue, $2,200.

POLK BOROUGH, VENANGO COUNTY

PRIVATE SUPPLY

Population 1910 census, 2,066; increase since 1900, 1,029. Estimated 1915, 2,500a

LOCATION

Central western Venango County, on banks if Sandy Creek; on Lake Shore & Michigan Southern Ry. Seat of State Institution for Feeble-Minded of Western Pennsylvania.

WATER SUPPLY

Private system of State Institution, installed 1894. Borough has no supply.

SOURCE AND COLLECTION

Springs, 1.5 miles northwest of buildings, on branch of Little Sandy Creek; reported minimum flow 150,000 gallons daily. Water from two springs piped, separately, each to a 60,000 gallon reservoir, nearby, each having 6-inch line joining to form an 8-inch, which receives a 4-inch line from other spring; 8-inch gravity main leads to 1,200,000 gallon reservoir on hill north of borough. Water soft.

During droughts water can be pumped from North Sandy Creek into 8-inch supply main, where it crosses creek, by duplex steam pump, or 0.25 mile below by a 350 g. p. m. electrically driven 11-inch centrifugal pump.

DISTRIBUTION

By gravity through 8-inch main; pressures 30 to 70 pounds; 3.2 miles delivery mains, 2-inch to 8-inch; 2.2 miles distributing mains, 2-inch to 8-inch; 66 fire hydrants, 2-inch and 4-inch.

CONSUMPTION

Supply to 2,000 people; 1,360 taps. Average daily consumption 300,000 gallons, all domestic; measured by weir at sewage disposal plant.

PORT ALLEGANY BOROUGH AND BROOKLYN VILLAGE (LIBERTY TWP.), McKEAN COUNTY

THE PORT ALLEGANY WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Port Allegany,	1,972	119	2,500
Brooklyn,			500

LOCATION

Eastern McKean County, on east bank of Allegheny River, Brooklyn being opposite on west bank; on Buffalo Division of Pennsylvania R. R.; terminus of Coudersport & Port Allegany Railroad. Built-up part on flats in river valley.

INDUSTRIES

Mississippi Glass Co., Elk Tanning Co., American Extract Co., Allegany Window Glass Co.

WATER SUPPLY

The Port Allegany Water Co., incorporated 1884 from private system of S. W. and W. E. Smith. Elk Tanning Company has private system.

THE PORT ALLEGANY WATER COMPANY

SOURCE AND COLLECTION

(1) Three tributaries of Skinner Creek, three reservoirs west of city, as follows:

Reservoir	Location	Watershed area (acres)	Capacity (gallons)	Elevation (feet)
Goding,	1 mile south of boro.,	200	1,350,000	178
Paugh Brook,	0.6 mile above mouth,	500	450,000	229
Sherwood,	1.5 miles above Goding reservoir,	500	400,000	236

Goding reservoir held in reserve for emergency fire purposes. Water soft.

(2) Springs feeding small reservoir in borough; supply main to tank used for street sprinkler only.

(3) Four drilled wells, 80 to 100 feet deep, in center of borough, near Main Street; used only for emergencies in dry season. A Ram-

sey 460,000 gallon triplex pump, connected to 40 hp. gas engine, pumps water through 6-inch force main 200 feet to distributing system. A 10-inch well has delivery main to pump well and three 8-inch wells have common 6-inch delivery. Capacity of wells greater than that of pumps. Water hard.

DISTRIBUTION

By gravity through 8-inch main 6,386 feet from Sherwood Reservoir to junction with 6-inch main 3,460 feet from Paugh Brook Reservoir, thence 4,800 feet as 6-inch to junction with 6-inch from Goding Reservoir, at junction enlarging to 8-inch to borough. Pressures 70 to 95 pounds; 5 miles 6-inch and 8-inch delivery mains and 6.5 miles distributing mains, 2-inch to 8-inch; 54 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,600 people; 500 taps, 20 in Brooklyn; 20 domestic and 5 industrial taps metered. Metered consumption 10,000 gallons industrial and 5,000 gallons domestic daily. Total stated consumption 400,000 gallons daily, 160,000 gallons is domestic and 240,000 gallons industrial. No means of measurement. About 500 people use private wells or springs. All industries have private systems.

ELK TANNING COMPANY SYSTEM

SOURCE AND COLLECTION

Four springs at tannery, just north of borough, on east bank of Allegheny River; water collected in 100,000 gallon reservoir; 2-inch gravity main to company houses.

Water for industrial purposes by gravity and by pumping from Allegheny River, springs and two wells through 4-inch force main to 30,000 gallon storage reservoir; or from water company.

CONSUMPTION

Supply to 200 people; 30 taps. Total stated consumption 300,000 gallons daily. No means of measurement.

RENO (SUGAR CREEK TWP.), VENANGO COUNTY

TWO PRIVATE SUPPLIES

Estimated 1915 population, 300b

LOCATION

Central Venango County, along west bank of Allegheny River, 3.5 miles below Oil City; on Franklin Division of Lake Shore & Michigan Southern R. R., Oil City & Franklin Branch of Erie R. R. and Citizens traction line. Built-up portion on flat land about 20 to 30 feet above river, and on hillside; range of elevation 150 feet.

INDUSTRIES

Oil works, asbestos works, woodworking company and cooperage company.

WATER SUPPLY

Two private systems; that of A. L. Confer, owner of Empire oil works, installed 1904, and that of Venango Oil and Land Co., installed 1908.

A. L. CONFER SYSTEM

SOURCE AND COLLECTION

Twelve springs and eight drilled wells on hillside northeast of village; springs connected by 2-inch pipe to 4-inch gravity line 1,000 feet to 150,000 gallon reservoir 144 feet above railroad tracks. Water from 8-inch drilled wells averaging 250 feet deep, pumped by oil well pumps, operated by Reed gas engine through 2-inch pipe to another 4-inch line to reservoir. Wells used only in emergency during dry seasons.

DISTRIBUTION

By gravity through one 6-inch and one 2-inch pipe; 1.6 miles distributing mains 1-inch to 6-inch, over half 2-inch.

CONSUMPTION

Supply to 100 persons; 20 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 3,000 gallons daily. Supplies refinery, Pennsylvania Cooperage Co., Oil City Asbestos Co. and Oil City Wood Working Co.

INDUSTRIAL SUPPLY

Empire oil works has private system, using Allegheny River and supplying refinery. No connection with other system. Average daily consumption 20,000 gallons.

VENANGO OIL AND LAND COMPANY SYSTEM

SOURCE AND COLLECTION

Springs on hillside 3,000 feet north of village and 175 feet above. Water from higher spring collected in catch basin having 4-inch pipe, 6 feet to 10,000 gallon distributing reservoir, which receives flow from seven small springs through 2-inch pipes. Water from lower spring collected in 18,000 gallon reservoir, thence pumped into 6-inch main to village. Water soft.

Drilled well 1,500 feet from reservoir used in dry season; water pumped to reservoir by 5 hp. gas engine driven pump.

DISTRIBUTION

By gravity from distributing reservoir through 6-inch pipe 3,000 feet to village; part pumped direct into system as above; 4,200 feet 2-inch laterals; pressures 20 to 85 pounds. No fire hydrants.

CONSUMPTION

Supply to 200 people; 65 taps. Stated average daily consumption 2,000 gallons, all domestic. No means of measurement.

ROULETTE (ROULETTE TWP.), POTTER COUNTY

ROULETTE WATER COMPANY

Estimated 1915 population, 1,100a

LOCATION

Western Potter County, on Allegheny River, at mouth of Fishing Creek; on Coudersport & Port Allegany R. R.

INDUSTRIES

Stave and heading factory, chemical works, glass works and lumber mill.

WATER SUPPLY

Roulet Water Co., incorporated 1904 for Roulette Township.

SOURCE AND COLLECTION

Lanninger Creek; intake 2 miles above mouth and 2.5 miles south of village; watershed area 1,500 acres. A 4-inch main 0.75 mile to 190,000 gallon distributing reservoir near creek; receives flow through 3-inch pipe from 40,000 gallon collecting basin at spring on other side of creek.

DISTRIBUTION

By gravity through 4-inch main from distributing reservoir. Pressures 40 to 50 pounds; can be increased to 120 pounds when distributing reservoir is by-passed; 5 miles 3- and 4-inch distributing mains; 5 fire hydrants.

CONSUMPTION

Supply to 655 people; 131 taps. Stated average daily consumption 50,000 gallons. No means of measurement.

ROUSEVILLE BOROUGH, VENANGO COUNTY

STONE HILL WATER COMPANY

Population 1910 census, 648; increase since 1900, 132. Estimated 1915, 700

LOCATION

Northern central Venango County, on east bank of Oil Creek, at mouth of Cherry Run; on Buffalo Division of Pennsylvania R. R. Built-up portion hilly; range in elevation 280 feet. Industries, oil refineries.

WATER SUPPLY

Stone Hill Water Co., incorporated 1905 for Rouseville Borough from private system installed 1895.

SOURCE AND COLLECTION

Five springs; three in northwestern corner of borough, piped to 16,500 gallon reservoir nearby; two in north central part of bor-

ough, one piped to tank and other pumped by 28,800 gallon Michigan pump to same tank during droughts. Reported flow of largest of three springs in northwestern part of borough 10,500 gallons; two others 4,500 gallons daily during ordinary periods. Other two springs flow 17,000 gallons daily in same period. Water medium hard.

DISTRIBUTION

By gravity through 2-inch pipe from tanks; pressures 60 to 70 pounds; 1.4 miles distributing mains, 1-inch to 3-inch; no fire hydrants.

CONSUMPTION

Supply to 500 people; 109 taps, all metered. No means of measuring consumption; assuming 30 gallons per capita, would be 15,000 gallons daily, all domestic. Hotel has small private system using spring; also supplies three houses.

INDUSTRIAL

Oil refineries have private system.

SAEGERSTOWN BOROUGH, CRAWFORD COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 712; increase since 1900, 105. Estimated 1915, 725a

LOCATION

Northern central Crawford County, on east bank of French Creek; on Erie R. R. and Northwestern Pennsylvania Electric Ry. Built-up portion level and above creek floods.

INDUSTRIES

In agricultural district; noted for mineral water springs. Summer population increased to 1,000.

WATER SUPPLY

Municipal works built in 1911. Saegerstown Inn has private supply.

MUNICIPAL WATER WORKS

SOURCE AND COLLECTION

Six 6-inch drilled wells, 54 feet deep, 1,000 feet from pumping station, on bank of French Creek, in northwestern part of borough. Pumping station owned by Saegerstown Inn; houses borough pump by agreement. Water pumped by 576,000 gallon pump through 8-inch force main direct to distributing system. Emergency 6-inch intake in French Creek. Water hard.

DISTRIBUTION

By pumping direct to system, with 8-inch connection to 50,000 gallon equalizing reservoir on hillside, west bank of French Creek; pressure 86 pounds. Mains as follows:

Size (inches),	8	6	4	Total
Length (miles),	0.5	1.25	1.25	3

Twenty-eight fire hydrants.

CONSUMPTION

Supply to 100 people; 71 taps; many used only for sprinkling. No means of measuring consumption; assuming 30 gallons per capita, would be 3,000 gallons daily, all domestic.

COST AND REVENUE

Total cost of works, $7,000; annual gross operating expenses, $800; gross revenue, $1,075.

SAEGERSTOWN INN PRIVATE SYSTEM

SOURCE AND COLLECTION

French Creek; 4-inch intake pipe from mill dam in northwestern part of borough. Snow pump discharges through 3-inch line into Scaife mechanical pressure filter, capacity 48,000 gallons daily. A 35,000 gallon cistern on bank of creek. 8-inch connection to gravel filter in creek, used when creek water is turbid.

DISTRIBUTION

By pumping through 3-inch line into two 2-inch lines from filter to hotel.

CONSUMPTION

Supply to 150 guests; drinking water from mineral springs. No means of measuring consumption; assuming 50 gallons per capita, would be 7,500 gallons daily, all domestic.

SANDY LAKE BOROUGH, MERCER COUNTY

SANDY LAKE WATER WORKS

Population 1910 census, 639; increase since 1900, 7. Estimated 1915, 640a

LOCATION

Northeastern Mercer County, at eastern end of Sandy Lake; on Sandy Creek; on Lake Shore & Michigan Southern R. R.

INDUSTRIES

Agriculture; coal mining in vicinity.

WATER SUPPLY

Sandy Lake water works, incorporated 1900 for Sandy Lake Borough, from private system of M. C. Potter, installed in 1893.

SOURCE AND COLLECTION

(1) Three springs 1 mile northwest of borough piped through 1½-inch pipes to 3,500 gallon reservoir. Water soft.

(2) A spring run intake 1.75 miles northwest of borough, piped to 50,000 gallon reservoir nearby.

DISTRIBUTION

By gravity through 3-inch mains from each reservoir, connecting in borough; excess water backs up into 14,000 gallon tank in borough; pressure 75 pounds; no fire hydrants.

CONSUMPTION

Supply to 400 people; 100 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 12,000 gallons daily, all domestic.

SHEFFIELD (SHEFFIELD TWP.), WARREN COUNTY

SHEFFIELD WATER COMPANY

Estimated population, 2,500b

LOCATION

Southeastern Warren County, on Tionesta Creek; on Pennsylvania R. R., Tionesta Valley R. R., Sheffield & Tionesta R. R. and Warren Street Ry. Range of elevations in built-up section 127 feet.

INDUSTRIES

Sheffield, Horton & Tionesta tanneries, extract works of Elk Tanning Co., lumber mill and small glass plant.

WATER SUPPLY

Sheffield Water Co., incorporated 1906 from unincorporated company known as Deer Lick Water Co., supplying since 1888. Elk Tanning Co. has separate system.

SOURCE AND COLLECTION

Deer Lick Run; reservoir capacity 4,500,000 gallons, 1.5 miles northeast of village and 148 feet above low part; watershed area 1,600 acres. Water soft.

DISTRIBUTION

By gravity through 8-inch main 6,160 feet long; pressures 10 to 70 pounds; 5.8 miles distributing mains, 34% 4-inch; 46 fire hydrants.

CONSUMPTION

Supply to 1,500 people; 334 taps, 229 metered. Daily consumption 43,600 gallons, 86% domestic and 14% industrial, measured by meters.

INDUSTRIAL

Supply to Elk Tanning Co. by Sheffield Water Co.; also private supply.

Sheffield Tannery: Water pumped from three deep wells, or Tionesta Creek if necessary, through 4-inch force main to 12,500 gallon tank for industrial supply. Four houses supplied by pumping from one deep well; others connected to Sheffield Water Co. or use private wells.

Horton Tannery: Water pumped from two wells or Tionesta Creek if necessary, through 4-inch force main, for industrial supply. Domes-

tic supply to 270 people, by 1½-inch gravity pipe from springs and by hand pump from wells. Union club house supplied by Sheffield Water Co.

Tionesta Tannery: Water pumped from Two Mile Creek, south of tannery, pond on Deer Lick Creek and one well, through 2-, 3- and 4-inch pipes, for industrial supply. Also by gravity from pond on Deer Lick Creek and one spring, for industrial use; total storage 50,000 gallons, pond holding 15,000 gallons. Domestic supply from private spring and Sheffield Water Co. to about 300 people.

Extract works: Water pumped from Tionesta Creek through condenser and back to stream.

Woodworking shop: Water pumped from well in planing mill to 1,000 gallon tank; supply also from Sheffield Water Co.

Total daily consumption as follows: Sheffield, 300,000 gallons; Tionesta, 150,000; Horton, 250,000; extract works, 450,000; wood shop, 3,600; total, 1,153,600 gallons.

SHINGLEHOUSE BOROUGH, POTTER COUNTY

SHINGLEHOUSE WATER COMPANY (Unincorporated)

Population 1910 census, 1,598 (Incorporated 1902). Estimated 1915, 1,600a

LOCATION

Extreme northwestern corner of Potter County, at junction of Honeoye and Oswayo creeks; on New York & Pennsylvania R. R.

INDUSTRIES

In natural gas region; two glass works, heading mill, and grist mill.

WATER SUPPLY

Shinglehouse Water Co., unincorporated company owned by C. C. and D. C. Van De Boe having contract with borough whereby they receive profit on investment and borough will gradually buy out company.

Empire Window Glass Co., a New Jersey corporation, has private system supplying plant and company houses.

SHINGLEHOUSE WATER COMPANY

SOURCE AND COLLECTION

(1) Nine springs in Persall Hollow, 1 mile south of borough line; 4-inch supply line connecting to 6-inch gravity main from reservoir on hillside near southern borough line, capacity 200,000 gallons, 150 feet higher than borough. Three springs in Warner Hollow, connected to distributing system by 1,300 feet of 2-inch pipe. Water soft.

(2) Auxiliary supply by pumping from $6\frac{1}{4}$-inch drilled well, 130 feet deep, near western edge of built-up portion; 4-inch force main to distributing mains.

Pumping equipment a Ramsey deep well pump and a Meyers deep well pump, capacity 64,800 gallons daily, belt-connected to gas engine. Water medium hard.

DISTRIBUTION

By gravity through 6-inch main 1,800 feet long; auxiliary pumping station; pressures 20 to 70 pounds; 3 miles distributing mains, 6 and 4-inch; 15 fire hydrants, 4-inch.

CONSUMPTION

Supply to 800 people; 200 domestic taps, 4 metered. No means of measuring consumption; assuming 30 gallons per capita, would be 24,000 gallons daily domestic. Stated industrial consumption 3,000 gallons daily.

INDUSTRIAL

Puritan Glass Co. has private system for industrial supply.

EMPIRE WINDOW GLASS COMPANY SYSTEM

SOURCE AND COLLECTION

Three driven wells, 70 to 120 feet deep, near boiler house of plant. Marsh deep well pumps, combined capacity 108,000 gallons daily, force water through 4-inch line directly into distributing mains. A $5\frac{5}{8}$-inch main from 4-inch line to 80,000 gallon reservoir on hillside 3,000 feet east of plant and 300 feet higher.

DISTRIBUTION

By pumping direct to system, reservoir used only for fire protection, giving 137 pounds pressure in borough. A 4-inch connection between systems of two companies makes it possible for either to supply entire borough if necessary.

CONSUMPTION

Supply to 200 people and works; 30 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 6,000 gallons daily, all domestic.

SMETHPORT BOROUGH, McKEAN COUNTY

SMETHPORT WATER COMPANY

Population 1910 census, 1,817; increase since 1900, 113. Estimated 1915, 1,850

LOCATION

County seat, east central McKean County, at junction of Marvin and Potato Creeks; on Pittsburgh, Shawmut & Northern R. R.; terminus of Keating & Smethport Ry. and of Mt. Jewett, Kinzua & Riterville R. R.

INDUSTRIES

Window glass works, glass bottle works, novelty works, chemical works, bottling works, creamery, grist mill and planing mill.

WATER SUPPLY

Smethport Water Co., incorporated 1881 for Smethport Borough.

SOURCE AND COLLECTION

(1) Blacksmith Run, tributary of Marvin Creek from west, and Sheldon Run, tributary of Blacksmith Run from north. A 1,348,000 gallon reservoir on Blacksmith Run; 3,000 gallon intake 2 miles west of borough and just north on Sheldon Run; watershed area above reservoir 1,800 acres. Water medium hard.

(2) Auxiliary supply from three 8-inch drilled wells, 217 feet deep, on north side of Blacksmith reservoir; water pumped into reservoir in dry seasons. Pumping equipment three steam pumps, total capacity 105,000 gallons daily, and one 25 hp. fire tube boiler,

DISTRIBUTION

By gravity through 2-inch mains, each 9,500 feet long, from reservoir, with 3-inch connection 1,000 feet long from intake; pressures 15 to 80 pounds; 7.7 miles distributing mains, 3-inch to 6-inch; 35 fire hydrants, $5\frac{1}{4}$-, $6\frac{1}{4}$- and $7\frac{1}{4}$-inch.

CONSUMPTION

Supply to 1,800 people, including East Smethport; 350 taps. Average daily consumption 300,000 gallons, 85% domestic and 15% industrial, measured by pump displacement.

Supplies industries and tank of Keating & Smethport Ry. near station, in southwestern part of borough. Railroad has, at Newton, auxiliary supply from drilled well and windmill pump.

INDUSTRIAL SUPPLY

Smethport Chemical Co., at East Smethport, has private system for industrial supply.

STONEBORO BOROUGH, MERCER COUNTY

MUNICIPAL WATER WORKS

Principal source of supply in Main Ohio Sub-basin, Section No. 20 (q. v.).

TIDIOUTE BOROUGH, WARREN COUNTY

TIDIOUTE WATER COMPANY

Population 1910 census, 1,324; increase since 1900, 87. Estimated 1915, 1,200a

LOCATION

Southwestern Warren County, on west bank of Allegheny River; on Allegheny Division of Pennsylvania R. R.

INDUSTRIES

Machine shop, cutlery works, hub works and furniture factory.

WATER SUPPLY

Tidioute Water Co., incorporated 1873 for Tidioute Borough.

SOURCE AND COLLECTION

Tidioute Creek; intake 3 miles northwest of borough. A 6-inch main 3.7 miles long, and 4-inch main same length, to distributing reservoir, in north central part of borough. Water soft.

DISTRIBUTION

By gravity through 10-inch main 725 feet long; pressures 30 to 60 pounds; 3.3 miles distributing mains, 4-inch and 6-inch; 37 fire hydrants, 4-inch.

CONSUMPTION

Supply to 900 people; 250 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 27,000 gallons daily, all domestic.

TIONESTA BOROUGH, FOREST COUNTY

TIONESTA WATER SUPPLY COMPANY

Population 1910 census, 803; decrease since 1900, 12. Estimated 1915, 950

LOCATION

County seat, western Forest County, at junction of Tionesta Creek with Allegheny River; on Allegheny Division of Pennsylvania R. R.; station on opposite side of river.

INDUSTRIES

Tank manufacturing shop, planing mill and grist mill.

WATER SUPPLY

The Tionesta Water Supply Co., incorporated 1892 for Tionesta Borough.

SOURCE AND COLLECTION

Emmett Spring Run, tributary of Tubbs Creek from south; intake 2 miles east of borough; 6-inch gravity main down run to Tubbs Creek, where it is joined by 6-inch tile line from small intake on spring 0.75 mile east. The 6-inch pipe continues west along Tubbs

Creek receiving 4-inch line from small intake dam on Spring Run 1 mile west of Emmett Spring Run; to 1,575,000 gallon reservoir on hillside in northern part of borough. Water soft.

DISTRIBUTION

By gravity through 6-inch main from reservoir; pressures 60 to 65 pounds. 2 miles distributing mains, 2-inch to 6-inch; 17 fire hydrants.

CONSUMPTION

Supply to 950 people; 85 domestic and 4 industrial taps. No means of measuring consumption; assuming 30 gallons per capita, would be 28,500 gallons daily, all domestic.

TITUSVILLE CITY, CRAWFORD COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 8,533; increase since 1900, 289. Estimated 1915, 8,684 (U. S. census)

LOCATION

Southeastern corner Crawford County, on Oil Creek; on Buffalo Division of Pennsylvania R. R., Titusville Electric Ry. and New York Central & Hudson River Ry.

INDUSTRIES

In oil and gas district; four oil refineries, wood working plants, two furniture factories, two planing mills, barrel factory, forge works, steel plant, four iron works, radiator manufacturing plant, cutlery works, paraffin works, soap works, silk mill, creamery and tannery.

WATER SUPPLY

Municipal system installed 1872. Elk Tanning Co. has private system for industrial supply.

SOURCE AND COLLECTION

Ten drilled wells, averaging 68 feet deep, just west of city line, on north bank of Oil Creek. Pumping equipment one 5,000,000 gallon Snow pump, one 2,000,000 gallon Holly and two 80 hp. and one

175 hp. boilers. A 22-inch suction line connected with wells by 8-inch pipes; 15-inch force main direct to distributing system. Three old cisterns, one with 18-inch sealed connection to creek, held in reserve for emergency fire supply. Water very hard. Whole city over subterranean stream or lake with inexhaustible supply of clear water of good quality.

DISTRIBUTION

By pumping directly to distributing system; pressures normally 40 to 125 pounds, can be forced up to 140 pounds; distributing mains 2-inch to 12-inch; 125 fire hydrants, 2½-inch.

CONSUMPTION

Supply to 8,000 people through 2,000 taps, 100 industrial metered. Average daily consumption 2,000,000 gallons 75% domestic and 25% industrial, measured by pump displacement. Supplies Elk Tanning Co. through 4-inch main for fire purposes.

INDUSTRIAL SUPPLIES

Elk Tanning Co. has private system for Queen City tannery. Water from drilled wells, 40 to 60 feet deep, pumped through 3-inch and 5-inch lines direct to tannery; intake in creek can be used. Total consumption 250,000 gallons, all industrial. Operations at extract works suspended.

The Titusville Iron Co., Limited, Titusville Light & Power Co. and radiator works have private systems for industrial supply.

UNION CITY BOROUGH, ERIE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 3,684; increase since 1900, 580. Estimated 1915, 4,400a

LOCATION

Southeastern Erie County, on South Branch of French Creek; on Pennsylvania R. R. and Erie R. R.

INDUSTRIES

Table, chair, furniture and woodworking factories, handle factories, saw, planing and feed mills and canning factory.

WATER SUPPLY

Municipal works installed in 1888.

SOURCE AND COLLECTION

(1) Lime Kiln Run, tributary of Bentley Run, just east of borough; 10,000 gallon reservoir near head of run supplied by springs, 2 miles north of borough; 8-inch line down run joining 12-inch line from 1,000,000 gallon storage reservoir at junction of Lime Kiln Run and Bentley Run, maintained as emergency supply. Water from seven wells pumped in dry seasons, by gasoline engine and oil well rigging, to delivery main at large reservoir.

(2) A 3,700 gallon reservoir, fed by springs at head of Thompsons Run, 1 mile east of borough.

(3) Pumping station on north bank of South Branch French Creek, in center of borough; used as emergency supply for fire protection. Small dam across stream diverts water to 11,000 gallon pump well; 8-inch suction; 8-inch force main to 12-inch gravity supply main. Pumping equipment a 1,440,000 gallon Allis-Chalmers fire pump, electrically driven.

DISTRIBUTION

By gravity through 12-inch line from Bentley Run reservoir, joined by 8-inch main from Lime Kiln reservoir enlarging to 14-inch; reduces to 12-inch as it joins distributing system. The 8-inch main receives a 4-inch main, 4,600 feet long, from Thompson Run reservoir. Pressure 60 pounds.

CONSUMPTION

Supply to 3,500 people; 950 taps. Stated average daily consumption 475,000 gallons. No means of measurement.

COST AND REVENUE

Total cost of works, $90,000; annual operating expenses about, $3,500; gross revenue (1913), $8,370.

VENANGO COUNTY HOME, VENANGO COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 150

LOCATION

Sugar Creek Village, northwestern Venango County, on north bank of French Creek, about 4 miles west of Franklin City; on Erie R. R.

WATER SUPPLY

Private system installed in 1872.

SOURCE AND COLLECTION

Springs on hillside 0.5 mile north of Home, piped to 78,000 gallon reservoir. Other springs 0.25 mile north also piped to system. Drilled wells near Home can be used in emergencies. Water soft.

DISTRIBUTION

By gravity through 3-inch pipe; 9 fire hydrants.

CONSUMPTION

Supply to 150 people; 10 taps. Stated daily consumption 420 gallons, all domestic. No means of measurement.

WARREN BOROUGH, WARREN COUNTY

THE WARREN WATER COMPANY
(American Water Works & Electric Co.)

Population 1910 census, 11,080; increase since 1900, 3,037. Estimated 1915, 15,214a

LOCATION

County seat, east central Warren County, on Allegheny River, at mouth of Conewango Creek; on Pennsylvania R. R., Warren Street Ry. and Jamestown & Warren Street Ry. Range of elevations in built-up portion 1,178 to 1,308.

INDUSTRIES

Six machine shops, two boiler and tank works, tannery, four furniture factories, nine oil refineries, acid works, axe factory, silk mill, barrel factory and brewery.

WATER SUPPLY

The Warren Water Co., incorporated 1881 for Warren Borough; controlled by American Water Works and Electric Co. of New York.

SOURCE AND COLLECTION

(1) Morrison Run, tributary of Allegheny River; impounding reservoir 4 miles southwest of borough, capacity 2,500,000 gallons; watershed area about 3 square miles. A 10-inch gravity main from reservoir to Glade Run pumping station, on north bank of Allegheny River; 18-inch intake pipe, 280 feet long, in river. Water soft. During rainy seasons and about 9 months of year the Morrison Run supply is sufficient, but at other times is supplemented by Allegheny River.

(2) Allegheny River; duplicate low service pumps, one compound and one triplex, capacity 3,000,000 gallons daily each, raise water to a settling tank through 16-inch force main. The 10-inch gravity main from Morrison Run discharges into this main.

Settling tank 50 feet diameter and 20 feet deep gives subsidence of 2 to 3 hours. Mechanical filters have six units, capacity 500,000 gallons daily each; 125,000 gallon filtered water basin underneath. High service pumps 3,000,000 gallon Worthington triplex, 2,000,000 gallon Worthington duplex and 2,000,000 gallon Prescott triplex, with two Geary 200 hp. water tube boilers.

DISTRIBUTION

By pumping directly into distributing system through 10-inch force main and a parallel 12-inch main reducing to 10-inch. Prescott pump forces water through main to a 1,500,000 gallon reservoir on hill just north of borough and west of Conewango Creek; held in reserve for fire protection. Pressures 15 to 80 pounds; fire pressure 110 pounds.

Distributing mains as follows:

Size (inches),	14	12	10	8	6	4	3 and smaller	Total
Length (miles),	0.1	1.5	5.8	4.1	10.7	8.5	6.7	37.4
Per cent.,	—	4	15	11	29	23	18	100

One hundred and sixty-five fire hydrants.

CONSUMPTION

Supply to 15,000 people; 2,700 taps, 20 industrial, 1,670 metered. Average consumption 908,000 gallons daily, 65% domestic and 35% industrial, measured by pump displacement; maximum 2,100,000 gallons.

WATERFORD BOROUGH, ERIE COUNTY

WATERFORD WATER COMPANY

Population 1910 census, 727; decrease since 1900, 43. Estimated 1915, 725a

LOCATION

Central Erie County, near Lake LeBoeuf, on LeBoeuf Creek, a tributary of French Creek. Waterford Station, on Erie Division of Pennsylvania R. R., 1 mile east of borough.

INDUSTRIES

Agriculture, carriage shop and grist mill.

WATER SUPPLY

Waterford Water Co., incorporated 1907 for Waterford Borough from private system built in 1906 by Charles Himrod.

SOURCE AND COLLECTION

Springs in northern part of borough enclosed in 100,000 gallon reservoir. Two springs, 80 feet apart and 800 feet above reservoir, flow 40 feet through narrow ravine to a dam; 1½-inch line to gravity main just below reservoir. Water medium hard.

DISTRIBUTION

By gravity through 6-inch main 0.5 mile long; pressures 0 to 15 pounds; 2.9 miles distributing mains, 4-inch and smaller; 13 fire hydrants, 4-inch.

CONSUMPTION

Supply to 600 people; 190 taps, 70 metered. Stated daily consumption 25,000 gallons, 20,000 metered and estimated domestic, and 5,000 gallons is metered industrial.

WEST END BOROUGH, VENANGO COUNTY

WEST END WATER COMPANY OF WEST END BOROUGH

Population 1910 census, 495; increase since 1900, 166. Estimated 1915, 500b

LOCATION

East central Venango County, adjacent to Oil City on south, on east bank of Allegheny River; on Pennsylvania R. R. and Citizens traction line.

INDUSTRIES

Suburban residential district; carriage and wagon works, gas engine works.

WATER SUPPLY

West End Water Co. of West End Borough, incorporated 1903 from private company supplying since 1887.

SOURCE AND COLLECTION

(1). Three springs in hollow southeast of borough; 60,000 gallon reservoir over one spring; second spring nearby piped through 3-inch line from point 1,800 feet southeast of river; third spring 1,200 feet southeast of second piped to reservoir through 2-inch line. Reported flow of springs in ordinary seasons 30,000 gallons daily.

(2). Three drilled wells on hill north of springs; water by old style oil well pumps to 30,000 gallon tank; capacity of pumps 40,000 gallons daily.

DISTRIBUTION

High and low services connected for service during droughts. Low service supplied by 6-inch gravity line from spring reservoir; pressure 57 pounds.

High service supplied by 6-inch gravity line from well tank; pressure 95 pounds.

CONSUMPTION

Supply to 500 people; 100 taps. Stated average daily consumption 35,000 gallons, 15,000 industrial to Riverside gas engine works. No means of measurement.

SECTION No. 17.

OHIO RIVER

MIDDLE ALLEGHENY SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

Table of Industrial Water Supplies (Coal Companies)

SECTION No. 17.

OHIO RIVER—MIDDLE ALLEGHENY SUB-BASIN.

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section is in the central western part of the State, south of the Upper Allegheny Sub-basin and west of the Upper West Branch Susquehanna Sub-basin; its greatest dimension, northeast and southwest, is about 84 miles. It is roughly triangular in shape, contains 2,900 square miles, and nearly all of it lies to the east of the Allegheny River, from above the mouth of the Clarion to above the mouth of the Kiskiminitas River. It includes the greater portion of Jefferson, Clarion and Armstrong counties, large parts of Elk and Indiana counties, and small parts of McKean, Forest, Clearfield and Butler counties.

SURFACE CHARACTERISTICS

It lies in the Allegheny plateau region, at a comparatively high elevation, the highest hills rising about 2,000 feet above sea level. The streams, especially the Clarion River are in deep, narrow gorges, and the Allegheny itself is flanked by high hills. The Allegheny follows the western boundary of the section about 10 miles therefrom. The basin is almost entirely included in the watersheds of the Clarion River and Red Bank, Mahoning, Cowanshannoc and Crooked creeks, all of which flow westwardly into the Allegheny.

POPULATION

The population in 1910 was less than 222,000, an increase of 15% over 1900; density is 76 per square mile; the urban being 21%.

Most of the large municipalities are on the tributaries, Kittanning and Ford City being the only ones on the main river. Greater Punxsutawney is on Mahoning Creek; St. Marys, Ridgway, Johnsonburg and Clarion are on the Clarion River, and Dubois, Brookville and Reynoldsville are on the Red Bank Creek watershed.

RESOURCES AND INDUSTRIES

Bituminous coal mining and coke making are the principal industries and are increasing. Lumbering, although less extensive than formerly, is still important, especially on the Clarion watershed. Other important resources are gas and oil (in the Clarion Valley chiefly), clay and glass sand. Farming is extensively practiced on the highlands and in Crooked Creek and Cowanshannoc Creek valleys. Brick and glass are made on a large scale, and there are large paper mills and various diversified manufacturing plants in the larger towns.

WATER SUPPLY

The Allegheny River and its three tributaries afford ample water supplies for the relatively sparse population, but industrial pollution has injured them, notably the Clarion River; and acids from the coal mines around Punxsutawney impregnate Mahoning Creek. There is, however, plenty of water of good quality for the ordinary needs of the communities and industries of this region. The supply systems are comparatively small and scattered. Surface and underground sources are about equal as to number, but pumping predominates as the method of delivery. There is but one city in this section; of the 45 boroughs, 27 are supplied with water, 10 of them having municipally owned systems. A large number of mining villages are supplied by coal companies. The aggregate population served by water supply systems is nearly 58,600.

DuBois obtains its water from a stream in the Upper West Branch Susquehanna Sub-basin, whence St. Marys also obtains a portion of its supply.

The largest industrial consumers are coal mines, coke ovens, tanneries, glass works and railroads, the aggregate industrial consumption being, so far as recorded, nearly 31,000,000 gallons per day. The total domestic use is slightly over 5,000,000 gallons. The railroads use over 5,200,000 gallons. This section ranks eighth as regards total water consumption and eleventh as regards use per square mile of drainage area.

The following tables give a summary of the water supplies in this section, both domestic and industrial, after which are detailed descriptions of the water supply systems arranged alphabetically according to places supplied:

OPERATING PUBLIC WATER SUPPLIES, SECTION NO 17

Place	County	Company	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Applewold,	Armstrong,	Franklin W. Co.,	300	300			1				
Brockwayville,	Jefferson,	Brockwayville Crystal W. Co.,	2,150	1,500			1				
Crenshaw,	Jefferson, Snyder Twp.,										
Brookville,	Jefferson,	Municipal,	3,600	2,500				1			
Clarion,	Clarion,	Clarion W. Co.,	3,501	3,600			1				
Cloe,	Jefferson, Bell Twp.,	Private,	375	100							1
Clover Run,	Clearfield, Bell Twp.,	Rocky Springs W. Co. (Madeira-Hill Coal Mining Co.)	600	300						1	
Creekside,	Indiana,	Creekside W. Co.,	650	400			1				
East Brady,	Clarion,	East Brady W. Co.,	1,500	900			1				
		Two private supplies,		40b					2		
Edenburg,	Clarion,	Municipal,	600b	400				1			
Falls Creek,	Jefferson,	Municipal,	1,800	750				1			
Ford City,	Armstrong,	Municipal,	4,856	4,850				1			
Greater Punxsutawney,	Jefferson,	Lindsey W. Co. (United Water & Guarantee Co.)	11,600	10,850			1				
Big Run,	Jefferson,										
Johnsonburg,	Elk,	Johnsonburg W. Co.,	5,334	3,500			1				
Rolfe,	Elk, Ridgway Twp.,										
Kittanning,	Armstrong,	Armstrong W. Co.,	8,000	7,200			1				
		Five private supplies,		800b					5		
Marion Center,	Indiana,	Marion Center W. Co.,	500	100b			1				
New Bethlehem,	Clarion,	Citizens W. Co. of New Bethlehem,	2,200	1,625			1				
South Bethlehem,	Armstrong,										
Parkers Landing,	Armstrong,	Parker City W. Co.,	1,300	860			1				
		Private—J. S. Brady,							1		
Reynoldsville,	Jefferson,	Reynoldsville W. Co. (United Water & Guarantee Co.)	4,450	3,540			1				
Ridgway,	Elk,	Municipal,	6,300b	5,000				1			
Rimersburg,	Clarion,	Municipal,	1,500	300				1			
Rural Valley,	Armstrong,	Municipal,	1,000	600				1			
St. Marys,	Elk,	St. Marys W. Co.,	7,000	7,000			1				
St. Petersburg,	Clarion,	St. Petersburg W. Co.,	450	430			1				
Shippenville,	Clarion,	Municipal,	400	50b				1			

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 17—Continued

Place	County	Company	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Sligo,	Clarion,	Municipal,	900b	150b				1			
Summerville,	Jefferson,	Peoples W. Co. of Summerville,	1,000	375			1				
		Private, Dr. Havens,		60					1		
Sykesville,	Jefferson,	Municipal,	1,800b	1,000b				1			

bEstimated by Water Supply Commission

Place	County	Company	Supply: Source: Surface	Supply: Source: Ground	Supply: Source: Combined	Supply: Method: Gravity	Supply: Method: Pumped	Supply: Method: Combined	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Applewold,	Armstrong,	Franklin W. Co.,	---	1	---	1	---	---	130,000	----------	130,000	433d
Brockwayville,	Jefferson,	Brockwayville Crystal W. Co.,	1	---	---	1	---	---	22,400a	33,600	56,000a	------
Crenshaw,	Jefferson, Snyder Twp.,											
Brookville,	Jefferson,	Municipal,	1	---	---	---	1	---	284,000	32,000	316,000	126t
Clarion,	Clarion,	Clarion W. Co.,	---	1	---	---	1	---	256,000	56,000	312,000	104t
Cloe,	Jefferson, Bell Twp.,	Private,	---	1	---	1	---	---	3,000b	----------	3,000b	------
Clover Run,	Clearfield, Bell Twp.,	Rocky Springs W. Co. (Madeira-Hill Coal Mining Co.)	1	---	---	---	1	---	8,000	20,000	28,000	93t
Creekside,	Indiana,	Creekside W. Co.,	---	1	---	1	---	---	8,000a	----------	8,000a	------
East Brady,	Clarion,	East Brady W. Co.,	---	1	---	---	---	1	18,540	260	18,800	21t
		Two private supplies,	---	2	---	---	2	---	----------	----------	1,500b	------
Edenburg,	Clarion,	Municipal,	---	1	---	---	1	---	----------	----------	28,000a	------
Falls Creek,	Jefferson,	Municipal,	1	---	---	1	---	---	25,000	25,000	50,000	67t
Ford City,	Armstrong,	Municipal,	1	---	---	---	1	---	105,000	223,000	328,000	66t
Greater Punxsutawney,	Jefferson,	Lindsey W. Co. (United Water & Guarantee Co.)	1	---	---	---	---	1	780,600	253,400	1,034,000	95t
Big Run,	Jefferson,											
Johnsonburg,	Elk,	Johnsonburg W. Co.,	---	---	1	---	---	1	267,000a	45,000a	312,000a	------
Rolfe,	Elk, Ridgway Twp.,											
Kittanning,	Armstrong,	Armstrong W. Co.,	---	---	1	---	---	1	850,000	400,000	1,250,000	174t
		Five private supplies,	---	5	---	1	4	---	40,000b	----------	40,000b	------
Marion Center,	Indiana,	Marion Center W. Co.,	---	1	---	1	---	---	----------	----------	1,560a	------
New Bethlehem,	Clarion,	Citizens W. Co. of New Bethlehem,	1	---	---	---	1	---	140,000	40,000	180,000	111t
South Bethlehem,	Armstrong,											
Parkers Landing,	Armstrong,	Parker City W. Co.,	1	---	---	---	1	---	63,000a	7,000a	70,000a	------
		Private—J. S. Brady,	---	1	---	1	---	---	----------	----------	----------	------
Reynoldsville,	Jefferson,	Reynoldsville W. Co. (United Water & Guarantee Co.)	---	---	1	---	---	1	400,000a	100,000a	500,000a	------
Ridgway,	Elk,	Municipal,	1	---	---	1	---	---	----------	----------	850,000a	------
Rimersburg,	Clarion,	Municipal,	---	1	---	---	1	---	2,200	----------	2,200	7d
Rural Valley,	Armstrong,	Municipal,	---	1	---	---	1	---	10,000a	----------	10,000a	------

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 17—Continued

Place	County	Company	Supply						Consumption (average daily)			
			Source			Method						
			Surface	Ground	Combined	Gravity	Pumped	Combined	Domestic (gals.)	Industrial (gals.)	Total (gals.)	Per capita (gals.)
St. Marys,	Elk,	St. Marys W. Co.,	1	---	---	---	1	---	990,000	510,000	1,500,000	214t
St. Petersburg,	Clarion,	St. Petersburg W. Co.,	---	1	---	---	1	---	1,000a	---	1,000a	---
Shippenville,	Clarion,	Municipal,	---	1	---	---	1	---	---	---	1,000	---
Sligo,	Clarion,	Municipal,	---	1	---	---	1	---	---	---	4,500	---
Summerville,	Jefferson,	{Peoples W. Co. of Summerville,	---	1	---	---	1	---	28,000a	---	28,000b	---
		{Private, Dr. Havens,	1	---	---	1	---	---	---	---	1,800b	---
Sykesville,	Jefferson,	Municipal,	---	1	---	---	1	---	---	---	40,000b	---

aEstimated by water companies
bEstimated by Water Supply Commission
dDomestic
tTotal

RAILROAD WATER SUPPLIES, SECTION NO. 17

BALTIMORE AND OHIO

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Bruin,	High Grade Oil Co.,		10,000	
Crown,	National Transit Co.,		17,000	
Frost,	Spring,	Gravity,	2,000	
Marienville,	Municipal,			14,000
Shippenville,	Mountain stream,	Pumped,	50,000	
Spring Creek,	Springs,	Gravity,	2,000	
Turkey City,	National Transit Co.,		48,000	
Tylersburg,	Artesian well,	Pumped,	27,000	

BESSEMER AND LAKE ERIE

Culmerville,	Bull Creek,	Pumped,	40,000	
Bessemer (North),	Municipal,			200,000
(Yards and Shops),				
Ivywood,	Well,	Pumped,	150,000	
Ford Collieries, Mine No. 1,	Mining Co.,			
East Oakmont,	City works,			
Russelton,	Well,	Pumped,	1,000	
Superior Mine,	Mining Co.,		3,000	
Red Raven,	Springs,	Gravity,	6,000	

BUFFALO & SUSQUEHANNA

DuBois,	Municipal,			163,000
Stanley,	B. R. & P. Ry.,		20,000	
Juneau,	Creek,	Pumped,	28,000	
Eckman,	Spring,	Gravity,	28,000	
Sagamore,	Buf. & Sus. Coal & Coke Co.		32,000	
Sagamore,	Municipal,			2,000

BUFFALO, ROCHESTER & PITTSBURGH

Brockwayville,	Brockway Crystal W. Co.,			50,000
Cummings,	Cummings W. Co.,		100,000	
DuBois (repair shops),	Kyle W. Co.,		100,000	
DuBois,	DuBois W. Co.,			20,600
DuBois locomotives,	Kyle W. Co.,		400,000	
Falls Creek,	Kyle W. Co.,	(Locos. and station)	100,000	
(Clarion Jct., locos. & yard)	Ketmer W. Co.,		350,000	
Hutchins,	Rocky Run,	Pumped,	150,000	
Johnsonburg,	Johnsonburg W. Co.,			10,300
Lanes Mills,	Brockway Crystal W. Co.,			10,000
Rasselas,	Well,	Pumped,	30,000	
Thayers,	Mill Creek,	Pumped,	100,000	
Eleanora,	R. & P. C. & I. Co.,		5,000	
Indiana Jct.,	Cloe W. Co.,		100,000	
Savan,	Little Mahoning Creek,	Pumped,	50,000	
Stanley,	Kyle W. Co.,		150,000	
Adrian,	R. & P. C. & I. Co.,		10,000	
Echo,	Pine Creek,	Pumped,		
Echo,	Reservoir,	Gravity,	150,000	
Elk Run Jct.,	Cloe W. Co.,		200,000	
Lindsey,	Punxsutawney W. Co.,			25,000
Punxsutawney,	Punxsutawney W. Co.,			400
North Point,	Reservoir,	Gravity,	50,000	
West Mosgrove,	Reservoir,	Gravity,	50,000	

RAILROAD WATER SUPPLIES, SECTION NO. 17—Continued

ERIE

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Bradford Division				
Brockwayville,	Municipal,			20,000
Hutchins,	Creek,	Pumped,		(B.R.&P.)
Rasselas,	Spring,	Pumped,		
	Well,	Pumped,		(B.R.&P.)
Johnsonburg,	Private,			

NEW YORK CENTRAL LINES

Lake Shore & Michigan Southern R. R.

Eastern Division				
Coder,	Coder Run Creek,	Pumped,	20,000	
Elmo,	Well,	Pumped,	90,000	
Sutton,	Well,	Pumped,	65,000	

PITTSBURGH, SHAWMUT & NORTHERN

Carman,	Spring,	Gravity,	12,000	
Croyland,	Spring,	Gravity,	12,000	
Haulton,	Spring,	Gravity,	12,000	
Hyde,	Stream,	Gravity,	100,000	
Kersey,	Wells,	Pumped,		
Paine,	Water Co.,			60,000
Allen,	Mill Creek,	Pumped,	38,000	
Brookville,	Swamp Run,	Pumped,	64,000	
Conifer,	Hill Run,	Pumped,	16,000	
Indian Camp,	Indian Camp Run,	Pumped,	23,000	
Furnace Run,	Allegheny River,	Pumped,	25,000	
Putneyville,	Hetrick Run,	Gravity,	21,000	
Reedy,	Deep Hollow Run,	Gravity,	30,000	
Timblin,	Pine Run,	Pumped,	22,000	

PENNSYLVANIA

Allegheny Division				
Donley,	Run,	Gravity,	105,000	
Clarion,	Run,	Gravity,	14,000	
Cowanshannock,	Allegheny River,	Pumped,	60,000	
Monterey,	Monterey Coal Co.,		203,000	
Monterey,	Spring,	Gravity,		
Kittanning,	Armstrong W. Co.,			44,000
Phillipson,	Well,	Pumped,	245,000	
Red Bank,	Well,	Pumped,	120,000	
Rimertown,	Well,	Pumped,		
DuBois,	River (emergency only),	Pumped,	60,000	
Iowa,	Run,	Gravity,	2,000	
New Bethlehem,	Citizens W. Co.,			22,200
Patton,	Shannon Run,	Gravity,	15,000	
Reynoldsville,	Well,	Pumped,		
	Springs,	Gravity,	10,000	
Slab Run,	Slab Run,	Pumped,		
	Well,	Pumped,	75,000	
Summit,	Spring,	Gravity,	2,000	
Rock Run,	Run,	Gravity,	12,000	
Sligo,	Big Licking Creek,	Pumped,	18,000	
Bellwood Division				
Punxsutawney,	Punxsutawney W. Co.,			55,000
Winslow,	Winslows Run,	Gravity,	31,500	
Renovo Division				
Croyland,	Spring,	Gravity,	5,000	
Brockwayville,	Brockwayville W. Co.,			15,600
Harvey's Run,	Spring,			
Indian Run,	Stream,	Gravity,	7,000	

RAILROAD WATER SUPPLIES, SECTION NO. 17—Continued

PENNSYLVANIA

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Renovo Division				
Smith Run,	Stream,	Gravity,	3,000	
Sergeant,	Stream,	Gravity,	50,000	
Seahonda,	Creek,	Gravity,	60,000	
St. Marys,	St. Marys W. Co.,			50,000
Ridgway,	Borough,			100,000
Tambine,	Stream,	Gravity,	20,000	
Wilcox,	Stream,	Pumped,	35,000	
TIONESTA VALLEY				
Thompson,	Spring Run,	Gravity,	1,000	
Pebble Dell,	Spring Run,	Gravity,	4,000	
Straits,	Spring Run,	Gravity,	4,000	
WESTERN ALLEGHENY				
Blackbearn,	Sugar Creek,	Pumped,		
	Drilled well,	Pumped,	30,000	
Kaylor,	Long Run,	Gravity,		
	Wells,	Pumped,	60,000	
Totals,			4,360,500	883,100

INDUSTRIAL WATER SUPPLIES, SECTION NO. 17 (MISCELLANEOUS COMPANIES)

Does Not Include All the Smaller Companies

Place	Company	Source	Method	Consumption (gallons per day)		Returned to stream (%)	Increase in temp. °F
				Domestic	Industrial		
Arroyo, Elk County,	Elk Tanning Co.,	North and South Kroah Runs,	Pumped,		225,000		
		Spring,		9,000b (300 pop.)			
Brookville, Jefferson County,	Glass plant,				350,000		
Falls Creek, Jefferson County,	Elk Tanning Co.,	Three springs,	Gravity,	4,500b (150 pop.)			
		Falls Creek,	Pumped,		400,000		
Ford City, Armstrong County,	Pittsburgh Plate Glass Co.:						
	No. 4 plant,	Allegheny River,	Pumped,		9,500,000	99	0
	No. 5 plant,	Allegheny River,	Pumped,		6,500,000	99	0
	Sand plant,	Allegheny River,			1,600,000	95	0
Instanter, Elk County,	Elk Tanning Co.,	7 Mile Run,	Gravity,		294,000		
		Well,					
		Spring,	Gravity,	6,000b (200 pop.)			
Johnetta, Armstrong County,	Pittsburgh-Buffalo Co. (brick works)	Allegheny River,	Pumped,		25,000		
Parkers Landing Armstrong County	Standard Oil Co.,	Allegheny River,	Pumped,				
Portland Mills, Elk County,	Elk Tanning Co.,	Well,	Pumped,		96,000		
		Spring,	Gravity,	4,000b (130 pop.)			
Reynoldsville, Jefferson County,	Elk Tanning Co.,	Springs,	Gravity,				
		Drilled wells,	Pumped,		300,000		
Ridgway, Elk County,	Elk Tanning Co.,	Two wells,	Pumped,		500,000		
	Eagle Valley Tannery,	Ridgway Municipal works,			(100,000)		
	Ridgway Tannery,	Aylesworth Run,	Pumped,		150,000		
		Two wells,	Pumped,				
	Extract works,	Clarion River,	Pumped,		950,000		
Shawmut, Elk County,	Shawmut Brick Works,	Shawmut Mining Co.,			24,000		
	Shawmut Clay Mfg. Co.,	Shawmut Mining Co.,			20,000		
Wilcox, Elk County,	Elk Tanning Co.,	Clarion River,	Pumped,	15,000b (500 pop.)	385,000		
		Two drilled wells,					
Total from private systems,				38,500	21,319,000		

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
Armstrong County—							
Johnetta,	Pittsburgh-Buffalo Co.,	Allegheny River,	Pumped,		100,000	255	1
Kaylor,	North Penn Coal Co.,	Sugar Creek, Long Run,	Pumped to storage tks.	25,000	s25,000	664	2
Sagamore,	Buffalo & Susquehanna Coal & Coke Co.	Plum Creek, Artesian well,	5,000,000 gal. res.	24,000 (2,500 pop.)	s288,000	3,610	4
Yatesboro,	Cowanshannock C. & I. Co., (See Yatesboro for more complete description)	Drilled wells,	Pumped,	75,000b (2,500 pop.)		4,300	4
Butler County—							
Karns City,	Samuel Sherwin,	Well,	Pumped,		s30,000	500	2
Cambria County—							
Saxman,	Greenwich Coal & Coke Co.,	Douglass Run Mine (emergency)	Pumped,	10,000	s20,000	790	2
Clarion County—							
Madison Township,	Keystone Mining Co.:						
	Sarah Furnace Mine,	Springs (3),	Gravity,	3,000 (28 fam.)	s6,000	320	1
	Sterling Furnace Mine,	Springs (3),	Gravity,	2,000b (16 fam.)	s10,000	362	1
Clearfield County—							
Bell Township,	Madeira-Hill Coal Mining Co., Inc.	Loss Run Creek,	1,000,000 res. pumped	8,000 (300 pop.)	s20,000	300	1
Eriton,	Northwestern Mining & Exchange Co.	Kyle Water Co., deep well,	Pumped,	3,000	s150,000	2,310	1
Elk County—							
Brandy Camp,	Shawmut Mining Co.,	Artesian wells, Stream,	Pumped, Gravity,		s16,000	622	1
Dagus Mines,	Northwestern Mining & Exchange Co.	Drilled wells,	Pumped,	10,000 (1,000 pop.)	s150,000	1,500	4
Drummond,	Shawmut Mining Co.,	Laurel Run,	Gravity,	35,000 (600 pop.)	s1,500	77 coal 114 clay	1

INDUSTRIAL WATER SUPPLIES, SECTION NO. 17 (COAL MINING COMPANIES)—Continued

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
Indiana County—							
Chambersville,	Seneca Coal Mining Co.,	Crooked Creek,	Pumped,		24,000	910	1
Ernest,	Jefferson & Clearfield Coal & Iron Co.	McKee Run,	Pumped,	30,000b			
		Drilled well,					
	(See Ernest for more complete description)	Creek,	Gravity,			2,675 coal	4
		Mine (aux.),	Pumped,			152 coke	
Rossiter,	Clearfield Bituminous Coal Corporation	Straight Branch Creek,	Pumped, 75,000 gal. res.		s50,000	2,410	3
	(See Rossiter for more complete description)	Drilled wells (2),	Pumped,	75,000 (1,500 pop.)			
Jefferson County—							
Adrian,	Rochester & Pittsburgh Coal & Iron Co.	3 drilled wells,	Pumped,	115,000 (400 pop.)	s140,000	1,720 coal 355 coke	1
	(See Adrian for more complete description)	4 drilled wells,	Pumped,		192,000		
		Little Elk Run,	Pumped,		c		
		Little Elk Run,	Pumped,		s190,000		
Anita,	John McLeavy & Co.,	Drilled well,	Pumped,		s7,500	446	1
Big Run,	Buffalo & Susquehanna R. R.,	Mahoning Creek,	Gravity,				1
Conifer,	Allegheny River Mining Co.,	2 drilled wells,	Pumped,	12,000 (800 pop.)			
	(See Conifer for more complete description)	Beaver Run,	Pumped,		100,000	1,975	1
Crenshaw,	Northwestern Mining & Exchange Co.	Spring,	Gravity,		s2,000	340	2
Eleanor & Sugar Hill,	Rochester & Pittsburgh Coal & Iron Co.	Well,	Pumped,	50,000b (1,650 pop.)			
	(See Eleanor for more complete description)	Laurel Run,	Pumped,		70,000	2,145 coal	3
		Well,	Pumped,			156 coke	
		Big Run,	Gravity,				
Florence,	Rochester & Pittsburgh Coal & Iron Co.	Elk Run,	Pumped,	1,000 (50 pop.)			
	(See Florence for more complete description)	Two drilled wells,	Pumped,		179,000	1,455	2
Horatio,	Anita Coal Mining Co.,	William Run,	Pumped, (emergency)		s400,000	812	1
		Punxsutawney W. Co.,					
		Drill hole,		2,000b (500 pop.)			
Ramsaytown,	Shawmut Mining Co.,	Branch of 5 Mile Run, Springs,	Gravity,		s20,000	1,375	2
		Mine (aux.),	Pumped,				

Sykesville,	Cascade Coal & Coke Co.,	Springs, Buck Run,	12 m. g. res. Gravity,	2,000 (200 pop.)	s125,000 c(220,000)	878 coal 484 coke	1
		Mine (aux.),	Pumped,				
Walston,	Rochester & Pittsburgh Coal & Iron Co. (See Walston for more complete description)	Drilled wells,	Pumped,	30,000b (800 pop.)	s190,000 c125,000	1,071 coal 454 coke	6
		Mahoning Creek,	Pumped,	(Fire protection)			
West Clarion,	Northwestern Mining & Exchange Co.	Saw Mill Cr. (emergency), Brockway Crystal W. Co.			s(30,000)	518	3
Total from private systems,				507,000	2,631,000		

bEstimated by Water Supply Commission.
cWater for quenching coke.
sWater for steam purposes.

ADRIAN (YOUNG TWP.), JEFFERSON COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 1,400

LOCATION

Southern Jefferson County, along Elk Run, tributary of Mahoning Creek; about 3 miles north of Greater Punxsutawney, on Pennsylvania R. R.

INDUSTRIES

Mines and coke ovens.

WATER SUPPLY

Private system of Rochester & Pittsburgh Coal & Iron Co., installed about 1890.

SOURCE AND COLLECTION

Three drilled wells, averaging 400 feet deep, in valley of small tributary of Elk Run, east of village; water raised by air lift to 20,000 gallon tank at pumping station, where two 288,000 gallon Cameron pumps with 3-inch suctions force water through 2-inch discharge pipes into 4-inch supply main.

DISTRIBUTION

By pumping direct to system with 4-inch connection to 24,000 gallon equalizing reservoir west of pumping station; pressure 15 pounds.

CONSUMPTION

About 1,400 persons supplied. Stated average daily consumption 250,000 gallons, 140,000 industrial, to 750 hp. boiler at mines. No means of measurement.

INDUSTRIAL

Four drilled wells, in ravine near village, used for mines; water raised by air lift to 60,000 gallon storage tank on hillside north, from which water passes through filters, capacity 216,000 gallons daily; thence pumped by two Snow pumps with 5-inch suctions and 4-inch discharge to boilers. Stated average daily consumption 192,000 gallons.

Coke ovens obtain water from small intake dam on Little Elk Run, tributary of Elk Run from west; water diverted to pump well, from which a Cameron pump, 7-inch suction, pumps water through 6-inch

line to coke ovens; excess backs up into two 30,000 gallons tanks. A 3-inch line also to 90,000 gallon filter plant for auxiliary supply of boiler by 3-inch line. An independent 6-inch fire line connected with a No. 10 Cameron pump; pressure 135 pounds.

Shaft known as Adrian Shaft, just south of village. No. 7 Cameron pump takes water from Elk Run through 4-inch suction; 3-inch force main to 36,000 gallon tank on hillside. Water supplied by gravity through 216,000 gallon filter plant to boilers of 2,000 hp. Stated average daily consumption 190,000 gallons.

APPLEWOLD BOROUGH, ARMSTRONG COUNTY

FRANKLIN WATER COMPANY

Population 1910 census, 300; increase since 1900, 178. Estimated 1915, 300a

LOCATION

Western central Armstrong County, on west bank of Allegheny river, opposite Kittanning; on Pittsburgh, Shawmut & Northern R. R. Built-up portion practically level. Residential suburb of Kittanning.

WATER SUPPLY

Franklin Water Co., incorporated 1891 for East Franklin Township.

SOURCE AND COLLECTION

Two springs on hillside directly back of borough; water collected in three 1,440 gallon tanks at larger, and two 4,800 gallon tanks at smaller spring. Springs and tanks about 90 feet above level of district supplied; watershed area 200 acres; stated minimum daily flow 250,000 gallons. Water soft.

DISTRIBUTION

By gravity through 4-inch line from large spring with 2-inch connection to other spring, length 0.1 mile. Distributing pipes 0.6 mile 3-inch; pressures 40 to 60 pounds; no fire hydrants.

CONSUMPTION

About 300 persons supplied; 60 taps, all metered. Stated average daily consumption, measured by meters 130,000 gallons; maximum 180,000 gallons, all domestic.

BROCKWAYVILLE BOROUGH AND CRENSHAW VILLAGE (SNYDER TWP.), JEFFERSON COUNTY

BROCKWAY CRYSTAL WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Brockwayville,	1,898	121	1,900a
Crenshaw,			250a
Total,			2,150a

LOCATION

Northeastern corner Jefferson County, on banks of Toby Creek; on Pennsylvania R. R., Pittsburgh, Shawmut & Northern R. R., Erie R. R. and Buffalo, Rochester & Pittsburgh R. R. Built-up area principally west of creek extending up hillside. Crenshaw on Erie R. R., 2 miles east of borough.

INDUSTRIES

Mining and agriculture; glass factory, grist mill. Crenshaw a mining village.

WATER SUPPLY

Brockway Crystal Water Co., incorporated 1897 for Brockwayville Borough and Snyder Township.

SOURCE AND COLLECTION

(1) Whetstone Run, tributary of Little Toby Creek from south, in Elk County Reservoir No. 1, capacity 1,500,000 gallons, 1.5 miles from mouth and 2.5 miles south of Crenshaw, held in reserve for fire purposes. Reservoir No. 2, capacity 3,120,000 gallons, 2,200 feet above No. 1, connected by 10-inch main. Watershed area 3,000 acres containing numerous springs.

(2) Intake dam, capacity 34,000 gallons, at headwaters of branch of Rattlesnake Run, tributary of Little Toby Creek, 5 miles southwest of borough and 179 feet above; watershed area 500 acres. Water soft.

DISTRIBUTION

From (1) by gravity through 10-inch main from reservoir No. 2, reducing to 8-inch at reservoir No. 1; thence 2.5 miles to Crenshaw, reducing to 6-inch 2 miles to borough.

From (2) by gravity through 10-inch main, reducing to 8-inch and 6-inch; 6-inch and 4-inch laterals in borough and 1½-inch in village. Supply mains as follows:

Size (inches),	10	8	6	Total
Length (miles),	3.5	4	3	10.5

Distributing mains 2 miles 4-inch and 2 miles 1½-inch; pressures 60 to 90 pounds; 20 fire hydrants, 3-inch.

CONSUMPTION

Supply to 1,500 persons. Stated average daily consumption 56,000 gallons, 22,400 domestic; 33,600 industrial, including that to tank for Buffalo, Rochester and Pittsburgh R. R., in northern part of borough, and one tank each on Pennsylvania R. R. and Erie R. R. in eastern part. Metered consumption 33,600 gallons, entirely industrial.

INDUSTRIAL

Three mines of Northwest Mining and Exchange Co., at West Clarion, just southwest of borough; supplied by Brockway Crystal Water Co., by pumping from West Run to 35,000 gallon tank on hillside. Consumption about 30,000 gallons daily. Two mines of company, at Crenshaw, obtain supply by collecting water of spring into wooden tank, thence delivered by gravity; 2,000 gallons per day for steam purposes.

BROOKVILLE BOROUGH, JEFFERSON COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 3,003; increase since 1900, 531. Estimated 1915, 3,600a

LOCATION

County seat, western central Jefferson County, at junction of Sandy Lick with North Fork to form Red Bank Creek; on Pennsylvania R. R. and Pittsburgh, Shawmut & Northern R. R. Occupies three hills at junction of creeks, about 250 feet above, with very little valley; population just outside borough about 1,200.

INDUSTRIES

Agricultural and coal mining district; glass plant, carriage works, two grist mills and planing mill.

WATER SUPPLY

Municipal works built in 1885 by Brookville Water Co. and purchased by borough in 1912; old intake and pumping station abandoned 1910.

SOURCE AND COLLECTION

North Fork Creek; intake and pumping station in borough near northern boundary. Two 1,000,000 gallon centrifugal pumps, with 12-inch suction pipe, lift water through 12-inch force main to 154,000 gallon settling basin; flows through two 500,000 gallon mechanical filter units to 26,000 gallon clear water well; one 1,000,000 gallon Dean triplex pump and one 750,000 gallon Gould pump, driven by 80 hp. Otto gas engine, pump through 12-inch force main 0.6 mile, to four 83,000 gallon storage tanks at highest point on hill in northern part of borough. Water soft.

DISTRIBUTION

By gravity; pressures 30 to 105 pounds. Distributing and supply mains as follows:

Size (inches),	12	8	6	4	3	Total
Length (miles),	0.7	0.5	0.1	6.9	1.1	9.3
Per cent.,	8	6		74	12	100

CONSUMPTION

About 2,500 persons supplied; 593 taps, 30 metered, 8 industrial. Stated average daily consumption, measured by pump displacement,

316,000 gallons; maximum 450,000 gallons; 90% domestic and 10% industrial. Many private systems have springs piped to two or three houses each.

COST AND REVENUE

Total cost of works, $123,000; annual operating expenses (including interest charges), $13,300; gross revenue, $13,000.

INDUSTRIAL

Glass plant uses 35,000 gallons daily, source of supply not known.

BUFFALO, ROCHESTER & PITTSBURGH RY., INDIANA COUNTY

CUMMINGS WATER COMPANY

LOCATION

Cummings Station, in central Indiana County on Crooked Creek, 5 miles north of Indiana Borough; on Buffalo, Rochester & Pittsburgh Ry.

WATER SUPPLY

Cummings Water Co., incorporated 1912 for Rayne Township. Indiana County; works constructed 1908.

SOURCE AND COLLECTION

Getty Run, tributary of Crooked Creek, near Cummings; 38,000,000 gallon storage reservoir 3,700 feet above above mouth of run; watershed area, 2 square miles. A 6-inch gravity main, 2,207 feet long, follows run to 50,000 gallon tank at Cummings.

CONSUMPTION

Supply to locomotives and yards. Average daily consumption 100,000 gallons; all industrial.

BUFFALO, ROCHESTER & PITTSBURGH RY., JEFFERSON COUNTY

CLOE WATER COMPANY

LOCATION

Indiana Junction, in central southern Jefferson County, 2 miles east of Punxsutawney, on Mahoning Creek; on Buffalo, Rochester & Pittsburgh Ry.

WATER SUPPLY

Cloe Water Co., incorporated 1912 for Bell Township, Jefferson County; works constructed 1909.

SOURCE AND COLLECTION

Jackson Run, tributary of Mahoning Creek, 2 miles east of Punxsutawney; 74,000,000 gallon storage reservoir about 0.5 mile above mouth of run and 1 mile east of Indiana Junction; watershed area 3 square miles. An 8-inch gravity line 5,212 feet in length follows run to its mouth; thence to 50,000 gallon tank at Indiana Junction.

CONSUMPTION

Supply to locomotives at Indiana Junction, "DC" Tower. Average daily consumption 100,000 gallons, all industrial.

BUFFALO, ROCHESTER & PITTSBURGH RY., ELK COUNTY

KETNER WATER COMPANY

LOCATION

Clarion Junction, in northern Elk County, northeast of Johnsonburg, on Clarion River; on Buffalo, Rochester & Pittsburgh Ry.

WATER SUPPLY

Ketner Water Co., incorporated 1912 for Jones Township, Elk County; works completed in 1912.

SOURCE AND COLLECTION

Johnson Run, tributary of Clarion River, 3 miles northeast of Johnsonburg; 92,000,000 gallon storage reservoir 3,650 feet above mouth of run; watershed area 7.8 square miles. A 12-inch gravity main 24,960 feet long follows run to its mouth and thence along north bank of Clarion River to two 50,000 gallon tanks at Clarion Junction.

CONSUMPTION

Supply to locomotives and yards at Clarion Junction. Average daily consumption 350,000 gallons, all industrial.

BUFFALO, ROCHESTER & PITTSBURGH RY., CLEARFIELD AND JEFFERSON COUNTIES

KYLE WATER COMPANY

LOCATION

DuBois Borough and Stanley Station, in northwestern Clearfield County, and Falls Creek Borough in western Jefferson County; on Sandy Lick Creek and Buffalo, Rochester & Pittsburgh Ry.

WATER SUPPLY

Kyle Water Co., incorporated 1912 for Washington Township, Jefferson County; works constructed in 1910. This company has an agreement with Falls Creek Borough to release from Kyle Run reservoir a maximum of 50,000 gallons daily whenever there is a shortage in supply of municipal works.

SOURCE AND COLLECTION

Kyle Run, tributary of Falls Creek, 390,000,000 gallon storage reservoir 3,500 feet above mouth of run and 3 miles northwest of Falls Creek Borough; watershed area 6 square miles. A 12-inch gravity main, 16,625 feet long, follows run to 50,000 gallon tank south of Falls Creek Borough, thence 6,739 feet southeast to two 100,000 gallon tanks at DuBois, and thence 35,156 feet south to 150,000 gallon tank at Stanley Station.

CONSUMPTION

Place	Supply	Average daily consumption (gallons)
Falls Creek,	Locomotives and station,	100,000
DuBois,	Locomotives,	400,000
DuBois,	Locomotive repair shops,	100,000
Stanley,	Locomotives and station,	150,000
Eriton,	Northwestern Mining Exchange Co.,	150,000
Total,		900,000

CLARION BOROUGH, CLARION COUNTY

CLARION WATER COMPANY

Population 1910 census, 2,612; increase since 1900, 608. Estimated 1915, 3,500a

LOCATION

County seat, central Clarion County, along Clarion River; on Baltimore & Ohio R. R. and Pennsylvania Southern R. R. Built-up portion on hill 425 feet above river, which circles it on north and west; average elevation, 1,480.

INDUSTRIES

Oil, gas and bituminous coal district; glass factory. Seat of Clarion State Normal School.

WATER SUPPLY

Clarion Water Co., incorporated 1887 for Clarion Borough and vicinity.

SOURCE AND COLLECTION

By pumping from 18 drilled wells, 6-inch diameter and approximately 100 feet deep, along south bank of Clarion River 0.5 mile north of center of borough. Supply abundant.

At certain times of year a Jewell filter unit is used to remove color from water, which first flows through a 102,000 gallon steel settling tank. Filter operated at high rate of 163,000,000 gallons per acre per day. Pumping equipment 700,000 gallon Gould pump, 150 hp. gas engine, 1,000,000 gallon centrifugal pump operated by 50 hp. gas engine, 1,700,000 gallon Wilson-Snyder compound non-con-

densing pump, 800,000 gallon Worthington pump, Ingersoll-Rand air compressor, 100 hp. F. A. Pitt boiler, 80 hp. Carrell boiler, total pumping capacity 1,730 g. p. m.

Water pumped through 0.7 mile 10-inch main to 250,000 gallon standpipe on Normal Hill, in eastern part of borough. Emergency connections by-pass the standpipe, so that water can be pumped directly from wells into mains.

DISTRIBUTION

By gravity, pressures 50 to 70 pounds. Distributing mains as follows:

Size (inches),	10	8	6	4	3	Total
Length (miles),	0.7	0.6	2.0	2.9	1.2	7.4

Fifty-nine fire hydrants, 8 of them 6-inch, the rest 4-inch.

CONSUMPTION

About 3,000 persons supplied; 600 taps. Stated average daily consumption, measured by pump displacement, 312,000 gallons; maximum 521,000 gallons; 18% industrial. Metered consumption 28,100 gallons daily, 100 domestic; 24 metered taps.

CLOE (BELL TWP.), JEFFERSON COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 375a

LOCATION

Southeastern Jefferson County, on Mahoning Creek, 2 miles east of Greater Punxsutawney; on Pennsylvania R. R. and Buffalo & Pittsburgh R. R.

INDUSTRIES

In mining district; saw mill.

WATER SUPPLY

Private system owned by consumers.

SOURCE AND COLLECTION

Large spring on hillside southeast of village; water collected in 12,000 gallon reservoir. Water soft.

DISTRIBUTION

By gravity through 0.3 miles 3-inch pipe; pressure about 30 pounds; 2 fire hydrants, 1-inch.

CONSUMPTION

About 100 persons supplied; 24 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 3,000 gallons daily, all domestic.

CLOVER RUN (BELL TWP.), CLEARFIELD COUNTY

ROCKY SPRINGS WATER COMPANY
(Madeira-Hill Coal Mining Company)

Estimated 1915 population, 600

LOCATION

Western Clearfield County, at headwaters of Wiskey Run, tributary of Upper West Branch of Susquehanna River; on Bellwood Division of Pennsylvania R. R.

INDUSTRIES

Clover Run mines of Madeira-Hill Coal Mining Co.

WATER SUPPLY

Rocky Springs Water Co., incorporated 1909 for Bell Township.

SOURCE AND COLLECTION

A 1,000,000 gallon reservoir formed by low timber crib dam near headwaters of Lost Run, branch of Clover Run, tributary of East Branch Mahoning Creek; dam short distance below big spring, source of run. Water flows by gravity through 0.3 mile 4-inch pipe to pumping station; pumped through 0.6 mile 3-inch pipe to 200,000 gallon reservoir on top of mountain northeast of village. Pumping equipment 216,000 gallon DuBois duplex steam pump and 60 hp. upright tubular boiler.

DISTRIBUTION

By gravity through 2.2 miles of mains, principally 3-inch; pressures 50 to 90 pounds; 1 fire hydrant.

CONSUMPTION

About 300 persons, power house and railroad supplied; 20 taps. Domestic supply through 58 $\frac{3}{4}$-inch outside hydrants. Average daily consumption 28,000 gallons, 20,000 industrial and 8,000 domestic; estimated from fall of water in reservoir.

CONIFER (OLIVER TWP.), JEFFERSON COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 1,000

LOCATION

Western central Jefferson County, near headwaters of Beaver Run, a tributary of Red Bank Creek; on Pittsburgh, Shawmut & Northern R. R.

INDUSTRIES

Mining village of Allegheny River Mining Co.

WATER SUPPLY

Private system of Allegheny River Mining Co.

SOURCE AND COLLECTION

Two drilled wells 2,000 feet deep, on hillside at north end of company houses. Two Meyers Bulldozer pumps, capacity each 43,000 gallons, pump through 4-inch and 3-inch lines to 20,000 gallon tank near station.

DISTRIBUTION

By gravity through 4-inch main to outside hydrants; pressure 40 pounds.

CONSUMPTION

Supply to 800 people through 25 hydrants for 150 houses. Stated average domestic consumption 12,000 gallons daily. No means of measurement. Separate system for mine use.

INDUSTRIAL SUPPLY

Small intake dam on Beaver Run, tributary of Red Bank Creek; water diverted by ditch to 7,000 gallon settling tank, with 6-inch connection to run. Two 432,000 gallon pumps, with 6-inch suction line, have 5-inch force main to 3,000 gallon tank at boiler house. Rated capacity of boilers 1,200 hp. Stated average daily consumption 100,000 gallons.

CREEKSIDE BOROUGH, INDIANA COUNTY

CREEKSIDE WATER COMPANY

Population 1910 census 563, incorporated 1905. Estimated 1915, 650

LOCATION

Central western Indiana County, along Crooked Creek at mouth of McKee Run; on Buffalo, Rochester & Pittsburgh R. R and Indiana County Street Rys. Range in elevation about 50 feet.

INDUSTRIES

Coal mine and coke plant at Ernest village, 1 mile east.

WATER SUPPLY

Creekside Water Co., incorporated 1907 for Creekside Borough, from private supply operating since 1904.

SOURCE AND COLLECTION

Four springs on hillside just south of borough and 200 feet above; two connected by 2-inch pipes to 3,200 gallon tank; other two connected to 3,500 gallon tank. Water hard.

DISTRIBUTION

By gravity through 1.5 miles supply and distributing mains, ½-inch to 3-inch. No fire hydrants.

CONSUMPTION

About 400 persons supplied; 75 taps. Stated average daily consumption 8,000 gallons, entirely domestic. No means of measurement. Metered consumption 700 gallons daily, all domestic; 6 taps metered.

DUBOIS BOROUGH, CLEARFIELD COUNTY
MUNICIPAL WATER WORKS

This borough is in Section No. 17, but source of its water supply is in Section No. 6. (See Section No. 6 for description).

EAST BRADY BOROUGH, CLARION COUNTY

EAST BRADY WATER COMPANY
TWO PRIVATE SUPPLIES

Population 1910 census, 1,493; increase since 1900, 260. Estimated 1915, 1,500a

LOCATION

Extreme southwestern corner of Clarion County, in loop formed by Allegheny River, 5 miles above mouth of Red Bank Creek; on Allegheny Valley Division of Pennsylvania R. R. Built-up portion on side and at foot of mountain nearly surrounded by river. Range in elevation 864 to 946.

INDUSTRIES

Several small bituminous coal mines in vicinity; two woolen mills.

WATER SUPPLY

(1) East Brady Water Co., incorporated 1895 for East Brady Borough, from two private systems supplying since 1875.

(2) Two small private supplies.

EAST BRADY WATER COMPANY

SOURCE AND COLLECTION

(1) Cunningham Spring, in eastern part of borough; water piped through 4-inch pipe to 90,000 gallon distributing reservoir 125 feet above main street. New storage tank, capacity 79,000 gallons, near reservoir; 4-inch gravity main 50 feet to 4-inch line from reservoir. Spring flows about 100,000 gallons daily in ordinary seasons and in dry weather, 58,000 gallons. Water soft.

(2) Reserve supply; drilled well, 76 feet deep, capacity 18,000 gallons daily, in western part of borough; water pumped by 200,000 gallon deep well pump connected to gas engine; force main 175 feet to distributing system.

DISTRIBUTION

By gravity and pumping, using reservoir as equalizer. One 4-inch main 700 feet, and one 4-inch main 1,200 feet, to system. Distributing mains as follows:

Size (inches),	6	4	3	Total
Length (miles),	0.3	1.8	0.2	2.3

Pressures 35 to 60 pounds; 16 fire hydrants, 3-inch.

CONSUMPTION

Supply to 900 people; 173 taps, all metered, one industrial. Average daily consumption 18,800 gallons, 260 gallons industrial to Valley Yarn and Woolen Mill Co.

PRIVATE SUPPLIES

J. W. Hill has private system supplying four or five families in borough by pumping from drilled well to small reservoir.

Scott Hotel, in borough, has private system, water from drilled well pumped to elevated tank.

EDENBURG BOROUGH, CLARION COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 616; decrease since 1900, 88. Estimated 1915, 600b

LOCATION

Northwestern Clarion County, on Canoe Creek, tributary of Clarion River; on Baltimore & Ohio R. R.

INDUSTRIES

Agriculture and oil production; machine shops, planing mill, grist mill and glycerine factory.

WATER SUPPLY

Municipal water works installed in 1882.

SOURCE AND COLLECTION

Drilled well, 5⅜-inch casing, 450 feet deep, just west of borough limits; deep well oil pump with 3-inch suction pumps water through 3-inch force main to three tanks nearby, two of capacity 10,000 gallons each and one 25,000 gallons. At higher elevation a 40,000 gallon tank for fire protection supplied by line from pump; supply main connects to gravity main from other tanks.

DISTRIBUTION

By gravity through 6-inch main; 4-inch and 3-inch laterals; pressure 65 pounds; from fire reservoir 95 pounds.

CONSUMPTION

Supply to 400 people; 135 taps; one outside northwest borough limits. Average daily consumption 28,000 gallons; maximum 40,000, minimum 24,000.

ELEANOR AND SUGAR HILL VILLAGES (McCALMONT TWP.), JEFFERSON COUNTY

PRIVATE SUPPLY

Estimated population 1915, Eleanor, 1,500; Sugar Hill, 500

LOCATION

Southeastern Jefferson County, at headwaters of Big Run, tributary of Mahoning Creek; on Buffalo, Rochester & Pittsburgh R. R. and Jefferson traction line.

INDUSTRIES

Mining villages, of Rochester and Pittsburgh Coal and Iron Co.

WATER SUPPLY

Private system of Rochester and Pittsburgh Coal and Iron Co., installed 1895.

SOURCE AND COLLECTION

Drilled well, 285 feet deep, near mine tipple at north end of Eleanor; water raised by air lift to 4,500 gallon tank; 288,000 gallon Cameron pump with 3-inch discharge pumps to system.

DISTRIBUTION

By pumping direct to system with 3-inch connection to 17,000 gallon equalizing tank on hill above villages; pressure 65 pounds.

CONSUMPTION

Supply to 1,500 people in Eleanor and 150 in Sugar Hill. Consumption not known; assuming 30 gallons per capita, would be about 50,000 gallons, all domestic.

INDUSTRIAL SUPPLY

At Eleanor source of supply is Laurel Run; No. 8 Cameron pump, capacity 288,000 gallons, with 6-inch suction at intake dam, pumps water through 4-inch force main to 20,000 gallon tank on hillside; water flows by gravity through 4-inch line to 600 hp. boilers. Stated average daily consumption 70,000 gallons.

At No. 3 shaft, north of Eleanor, drilled well used to supply boiler running engine for air fan. At shaft below village, intake dam on tributary of Big Run supplies water for boilers.

ERNEST (RAYNE TWP.), INDIANA COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 1,500

LOCATION

Central western Indiana County, on McKee Run, about 1 mile above its mouth in Crooked Creek; on Buffalo, Rochester & Pittsburgh R. R. and Indiana County Street Rys.

INDUSTRIES

Mines and coke plant of Jefferson and Clearfield Coal and Iron Company.

WATER SUPPLY

Private system of coal and iron company, built 1902.

SOURCE AND COLLECTION

A 16-foot dam on McKee Run, opposite village and above mine; 12-inch gravity main, reducing to 10-inch, to settling tank and mechanical filter plant, capacity 120,000 gallons daily. Water for domestic purposes pumped by Cameron pump through 6-inch line to three wooden tanks on hilltop back of village.

Auxiliary supply in dry seasons from 8-inch drilled well, 128 feet deep, in valley of creek; cased through coal 30 feet below surface.

DISTRIBUTION

Domestic supply by gravity.

CONSUMPTION

Supply to about 1,000 people. Consumption not known; assuming 30 gallons per capita, would be 30,000 gallons daily.

INDUSTRIAL SUPPLY

Supply to coke ovens from creek by gravity overflow from compressor and mine water. Water for boiler purposes treated with soda ash and pumped by one of three Jeanesville pumps direct to boilers.

FALLS CREEK BOROUGH, JEFFERSON COUNTY

MUNICIPAL WATER WORKS

Population 1910 census 1,204; incorporated 1900. Estimated 1915, 1,800

LOCATION

Northeastern Jefferson County, near Clearfield County line; on Sandy Lick Creek, at mouth of Falls Creek; on Pennsylvania R. R., Buffalo, Rochester & Pittsburgh R. R., Reynoldsville & Falls Creek R. R. and DuBois Electric Traction Ry. Built-up portion on high, irregular ground; range of elevations 130 feet.

INDUSTRIES

Skylight glass plant, tannery, brick works, bottle works and pottery.

WATER SUPPLY

Municipal works built in 1904, intake changed in 1912.

SOURCE AND COLLECTION

Falls Creek, tributary of Sandy Lick Creek from west; 5,000,000 gallon reservoir 600 feet west of northwest corner of borough; watershed area 13 square miles. Dam 7 miles below Kyle Run dam of Buffalo, Rochester & Pittsburgh R. R., capacity 490,000,000 gallons. When borough may so desire, railroad company will release maximum of 50,000 gallons daily from dam into creek. An 8-inch gravity main 3,000 feet to filter and pumping station on creek, at Taylor Avenue and Sixth Street, in borough. Water flows through settling basin and two 25,000 gallon per day slow sand filters to two 22,500 gallon clear water basins; pumped by 400,000 gallon Gould triplex pump, connected to 25 hp. Oil City gas engine, through 6-inch force main to distributing system.

DISTRIBUTION

By pumping direct to system, with 6-inch connection to 125,000 gallon equalizing reservoir, the old distributing reservoir on hill in northwest part of borough. Pressures 10 to 70 pounds. Supply mains 900 feet 6-inch pipe. Distributing mains as follows:

Size (inches),	12	8	6	4	Total
Length (miles),	0.2	0.6	1.5	0.8	3.1

Thirty-two fire hydrants, 2½-inch.

CONSUMPTION

About 750 persons supplied; 184 taps, a few in township on east. Stated average daily consumption, measured by fall of water in tank, 50,000 gallons, maximum 55,000 gallons; 50% industrial; 107 taps metered, 3 industrial; metered consumption 12,000 gallons daily industrial and 18,000 domestic.

COST AND REVENUE

Total cost of works, $37,000; annual operating expenses, $500; gross revenue, $1,350.

INDUSTRIAL

Elk Tanning Co. plant lies partly in borough and partly in Falls Creek Village, Clearfield County. Domestic supply obtained by collecting water from three springs, two to 500 gallon reservoir and one to 3,000 gallon reservoir, thence by gravity through 1¼-inch and 2-inch pipes to company houses. About 48 houses, or 150 persons, supplied. No means of estimating consumption; assuming 30 gallons per capita, would be 4,500 gallons per day. Industrial supply obtained by pumping from Falls Creek and from 8-inch drilled well 398 feet deep to 4,000 gallon reservoir. Consumption about 400,000 gallons per day.

FLORENCE (McCALMONT TWP.), JEFFERSON COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 50

LOCATION

Southern Jefferson County, near headwaters of Elk Run, tributary of Mahoning Creek; about 4 miles north of Greater Punxsutawney borough on Buffalo, Rochester & Pittsburgh R. R. and Jefferson traction line.

INDUSTRIES

Mines of Rochester & Pittsburgh Coal and Iron Co.; most of employes live at Anita Village, just south.

WATER SUPPLY

Private system of Rochester & Pittsburgh Coal and Iron Co.

SOURCE AND COLLECTION

Two drilled wells and intake dam on Elk Run; pumping equipment three Snow pumps with 6-inch suctions; one 5-inch and two 3-inch discharges. Water from creek and one drilled well pumped to two 100,000 gallon receiving tanks and thence to filter, capacity 216,000 gallons daily; from other well pumped to 5,400 gallon receiving tank, thence to boilers.

DISTRIBUTION

By gravity to hydrants at houses and to boilers.

CONSUMPTION

Supply to 11 houses and boilers at mines. Average daily consumption 180,000 gallons when mine is running at full capacity, probably 1,000 gallons domestic.

FORD CITY BOROUGH, ARMSTRONG COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 4,850, increase since 1900, 198. Estimated 1915, 4,850.

LOCATION

Western central Armstrong County, along east side of Allegheny River; on Pennsylvania R. R. and Kittanning and Leechburg railways. Built-up portion on flat ground along river, bounded on east by steep hill rising 1,500 feet from river.

INDUSTRIES

Pittsburgh Plate Glass plant, Pennsylvania Insulator Co. and machine company.

WATER SUPPLY

Municipal works built in 1888 by Pittsburgh Plate Glass Co.; taken over by borough 1905.

SOURCE AND COLLECTION

Allegheny River; water filters through sand and gravel into one well in river and two on bank; river well 22 feet below water and 16 feet diameter; one well on bank, 50 feet from river, 22 feet deep and 16 feet diameter; other, 200 feet from river, 36 feet deep and 16 feet diameter, all filled with sand and gravel. Water from river well by gravity through 12-inch pipe to wells on bank, whence 12-inch suction lines extend to pumps. Pumping equipment two 400,000 gallon Gould triplex expansion pumps and two 50 hp. Brighton gas engines. Water soft.

Emergency supply can be obtained from plant of Pittsburgh Plate Glass Co., which secures supply by pumping from Allegheny River.

DISTRIBUTION

By pumping directly into system through 12-inch force main, with connection to 1,000,000 gallon equalizing reservoir on bluffs back of borough. Distributing mains as follows:

Size (inches),	12	10	6	4	Total
Length (miles),	0.5	0.6	4.3	0.5	5.9

Pressures 80 to 85 pounds; 56 fire hydrants, 5½-inch.

CONSUMPTION

Supply to entire population of 4,850 persons, 786 taps, 726 metered. Stated average daily consumption, measured by pump displacement, 328,000 gallons; 223,000 industrial and 105,000 domestic.

COST AND REVENUE

Total cost of works, $60,000; annual operating expenses, $4,200; gross revenue, $10,260.

INDUSTRIAL

The Pittsburgh Plate Glass Co. uses water from Allegheny River; can supply borough in emergencies. No. 4 works use 12,000,000 gallons. 11,120,000 gallons returned to river; No. 5 works use 2,500,000 gallons, all returned to river.

GREATER PUNXSUTAWNEY AND BIG RUN BOROUGHS, JEFFERSON COUNTY

LINDSEY WATER COMPANY
(United Water and Guarantee Company)

	Population 1910 census	Increase since 1900	Estimated 1915
Greater Punxsutawney,	9,058	2,312	10,400
Big Run,	1.032	153	1,200

LOCATION

Southeastern Jefferson County, along Mahoning Creek; on Pennsylvania R. R., Buffalo, Rochester & Pittsburgh R. R., Jefferson Traction line and United Traction Street Ry. Big Run, 6 miles northeast of Greater Punxsutawney. Range of elevation in Greater Punxsutawney 200 feet.

INDUSTRIES

Mining district; tannery, saw mills, door and sash factory, four planing mills, glass works, two brick yards, steel hoop mill, three machine shops, range and boiler works, blast furnace, two breweries and two flour mills.

WATER SUPPLY

Lindsey Water Co., incorporated 1898 for Clayville Borough, now part of Greater Punxsutawney; owns controlling interest in Punxsutawney Water Co., incorporated 1887 for Punxsutawney Borough, and Big Run Water Co., incorporated 1900 for Big Run Borough, the latter of which it also operates; controlled by United Water and Guarantee Co.

SOURCE AND COLLECTION

(1) A 100,000,000 gallon reservoir on Clover Run, 3 miles above its mouth, in East Branch of Mahoning Creek. Reservoir 4 miles southeast of Big Run Borough, 8 miles east of Greater Punxsutawney; watershed area 3 square miles. Water medium hard.

(2) During dry seasons water pumped from small intake dam at forks of East Branch of Mahoning Creek and Clover Run, 3 miles below reservoir. Water medium hard. Pumping equipment two 1,000,000 gallon Laidlaw-Dunn-Gordon duplex compound pumps, one 2,160,000 gallon Gould centrifugal pump, one 100 hp. boiler, one 150 hp. boiler, one 10 hp. Bradford vertical steam engine, one storage tank for wash water for filters.

FILTERS

Gravity coagulating plant at Clover Run reservoir, using sulphate of alumina; after sedimentation water delivered through 3 miles 14-inch, reducing to 12-inch, main to mechanical pressure filters, four 500,000 gallon units, along south bank of Clover Run, at junction with East Branch, 1 mile south of Big Run Borough; elevation 240 feet below reservoir, 40 feet above Big Run Borough and 72 feet above Greater Punxsutawney. Filters can be by-passed when necessary. Sulphate of alumina applied to water at pump intake source No. 2 about 4 hours subsidence; water pumped through filters into distributing system.

DISTRIBUTION

By gravity from Clover Run reservoir through filters to Big Run Borough, thence through 5 miles of 12-inch mains to Greater Punxsutawney; excess backs up into 1,200,000 gallon reservoir on hill in Greater Punxsutawney, serving both for storage and as equalizer. Supply mains, 6 miles 14-inch and 12-inch. Distributing mains as follows:

Size (inches)	12	10	8	6	4	Total
Length (miles)	1.0	2.0	1.5	1.5	6	12
Per cent	(25)		12	13	50	100

Pressures 60 to 100 pounds; 168 fire hydrants, 4-inch, 28 in Big Run Borough.

CONSUMPTION

	Persons supplied	Domestic	Industrial	Total	Maximum
Greater Punxsutawney,	10,000	750,000	250,000	1,000,000	1,100,000
Big Run,	850	30,600	3,400	34,000	

Metered consumption in Greater Punxsutawney 100,000 gallons domestic, 200,000 industrial; 142 meters.

INDUSTRIAL

Mine of Buffalo & Susquehanna R. R. on south bank Mahoning Creek, just west of Big Run, supplied from intake in Mahoning Creek; small run feeds reservoir by gravity.

JOHNSONBURG BOROUGH AND ROLFE VILLAGE (RIDGWAY TWP.), ELK COUNTY

JOHNSONBURG WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Johnsonburg,	4,334	440	4,834
Rolfe,			500

LOCATION

Central northern Elk County, at junction of West Branch of Clarion River with Clarion River; on Pennsylvania R. R. and Buffalo, Rochester & Pittsburgh R. R. Built-up portion of Johnsonburg irregular, elevations 1,435 to 1,600; Rolfe comparatively level, elevations 1,442 to 1,465 feet above sea level.

INDUSTRIES

Paper mills of New York and Pennsylvania Paper Co., brick works, tannery, foundry and machine shops, carbon works.

WATER SUPPLY

Johnsonburg Water Co., incorporated 1890 for Ridgway Township.

SOURCE AND COLLECTION

(1) Silver Creek, tributary of West Branch Clarion River; 16,000,000 gallon reservoir 3 miles northwest of borough at elevation 1,572; watershed area 1.6 square miles.

(2) Powers Run, tributary of Clarion River; pumping station in Johnsonburg at east end of East Avenue, 0.5 mile above mouth of run; intake at elevation 1,430; 1,100 feet upstream small intake dam at elevation 1,735, having 10-inch pipe to 345,000 gallon settling basin; watershed area at pumping station 10 square miles. One spring north of reservoir collected in 900 gallon basin with 8-inch outlet pipe emptying into a 12-inch line 250 feet to settling basin; water treated with hypochlorite. Five 6-inch wells nearby 87 to 122 feet deep, used only in dry seasons as follows:

No.	Location	Discharge pipe
1	30 feet below intake,	5-inch to intake
2	225 feet upstream from settling basin,	2-inch to intake main
3	45 feet from pumping station along hillside,	2-inch to settling basin
4	20 feet from springs,	Never connected
5	35 feet from settling basin,	2-inch to settling basin

Pumping equipment 864,000 gallon Deane triplex pump operated by Struthers-Wells gas engine, 1,000,000 gallon Snow duplex and 500,000 gallon Blake duplex steam pump operated by one 25 hp. and one 65 hp. Erie boiler. Water pumped through 6-inch force main over hill into 250,000 gallon and 500,000 gallon distributing reservoirs nearby, 0.5 mile north of pumping station; also used as equalizing reservoirs on Silver Creek supply. Receive flow from two small springs in northeastern part of borough; two 4-inch lines uniting to form 6-inch to reservoirs.

(3) Hill springs, two springs on hillside, in northern part of borough, at elevation 1,750.

Water from streams and springs soft; from wells hard.

DISTRIBUTION

From (1) by gravity through 10-inch main to Rolfe village, western Johnsonburg, drinking water for paper mills, and small portion of flats along Johnsonburg Railroad; excess backs up into distributing reservoirs in borough.

From (2) by gravity from distributing reservoirs through 0.5 mile 6-inch main, or by direct pumping from 6-inch force main.

From (3) by gravity through 6-inch main to Fourth Avenue and along that street to Bridge Street, supplying a few consumers.

Pressures 60 to 120 pounds; 64 fire hydrants, 4-inch, 50 being in Johnsonburg.

CONSUMPTION

About 3,500 persons supplied through 700 taps as follows:

	Population supplied	Taps	*Average daily consumption	
			Industrial	Total
Johnsonburg,	3,100	675	45,000	300,000
Rolfe,	400	25		12,000

*No means of accurately measuring consumption.

In Johnsonburg, 11 domestic and 7 industrial meters; average daily metered consumption 38,000 gallons industrial, 15,000 domestic.

KITTANNING BOROUGH, ARMSTRONG COUNTY

ARMSTRONG WATER COMPANY AND PRIVATE SUPPLIES

	Population 1910 census	Increase since 1900	Estimated 1915
Kittanning,	4,311	409	8,000*
Wickboro,	2,775	(Inc. 1900)	

*Kittanning and Wickboro consolidated into Kittanning Borough December, 1913.

LOCATION

County seat, western central Armstrong County, along east side Allegheny River; on Pennsylvania R. R. and Kittanning & Leechburg Rys. Built-up portion on flat along river; mean elevation 830 feet above sea level.

INDUSTRIES

Iron and steel works, plate glass plant, china plant, two breweries, clay products works, brick works, foundry, lumber company, planing mill and writing machine plant.

WATER SUPPLY

(1) Armstrong Water Co., incorporated 1886 for Kittanning Borough; purchased property and franchises of following companies:

Name	Inc.	Date of purchase	Incorporated for
Citizens Water Co. of Kittanning,	1905	1907	Kittanning Borough
Manorville Water Co.,	1901	1907	Manorville Borough
Manor Township Water Co.,	1901	1907	Manor Township
Nealton Water Co.,	1900	1907	Rayburn Township
*Rayburn Water Co.,	1898	1907	Rayburn Township
West Kittanning Water Co.,	1901	1907	Kittanning Borough
Kittanning Water Co.,	1863	1886	Kittanning Borough

*Operating at time of purchase.

Original supply by Kittanning Water Co., which built works in 1871.

(2) Five private supplies.

ARMSTRONG WATER COMPANY

(1) A 20-inch intake pipe in Allegheny River to pump well; water pumped through 16-inch force main to 1,700,000 gallon settling basin on hillside back of pumping station, 400 feet from river between Arch and Vine Streets. After treatment, water flows through five 300,000 gallon units combined gravity and pressure filter to 1,200,000 gallon clear water basin at elevation 1,064. Several hundred feet south of clear water basin water from small stream diverted by dam through 10-inch terra cotta pipe to reservoir. Pumping equipment 3,000,000 gallon Barr vertical compound pump with 20-inch suction, 1,500,000 gallon Worthington horizontal compound pump with 10-inch suction, two 100 hp. gas fired boilers.

(2) Small reservoir 0.25 mile west of above reservoir, receiving surplus from supply to few houses in Rayburn Township.

(3) Original source of Rayburn Water Co. for supply in Wickboro; springs collected into two wooden tanks; flow of springs 48,000 gallons daily in dry seasons. All water medium hard.

DISTRIBUTION

From (1) by gravity through 14-inch main, reducing to 10-inch in borough.

From (2) by gravity to several houses in Rayburn Township.

From (3) by gravity to Wickboro.

Pressures 60 to 90 pounds; 78 fire hydrants, four 6-inch, the rest 4-inch. Supply mains 0.1 mile 20-inch, 0.5 mile 16-inch and 0.1 mile 14-inch.

Distributing mains as follows:

Size (inches),	10	8	6	4	3	2	Total
Length (miles),	2.1	0.2	4.0	6.6	0.1	0.4	13.4
Per cent.,	16	2	30	49	(3)		100

CONSUMPTION

Supply to 7,200 people; 1,353 taps, 22 industrial metered. Average daily consumption 1,250,000 gallons, 400,000 metered industrial, measured by pump displacement; maximum 1,500,000 gallons.

PRIVATE SUPPLIES

(1) Queen Water Co. (unincorporated), reorganized as Spring Water Co., unincorporated; cooperative system built in 1909, supplying 12 houses in northern end of Kittanning. Water from spring piped to reservoir; distributed through 4-inch and 2-inch pipes to consumers. County Commissioners own twelve shares for supply to court house and jail.

(2) Wickboro Cooperative Water Co. (unincorporated); works built 1909; supply to 50 houses. Two 5-inch drilled wells 65 feet deep, water pumped by air lift through 4-inch pipe with 3-inch laterals; pressure 70 pounds.

(3) Crystal Water Co. (unincorporated); works built 1908; supply to 18 houses in Kittanning. One well 64 feet deep pumped by air lift.

(4) Public School building system; two 5-inch wells, 70 and 90 feet deep, pumped by air lift.

(5) John Caldwell and John Hudson; similar supply.

Total number of persons supplied by above private systems approximately 800. No means of measuring consumption; assuming 50 gallons per capita, would be 40,000 gallons all domestic.

MARION CENTER BOROUGH, INDIANA COUNTY

THE MARION CENTER WATER COMPANY

Population 1910 census, 366, increase since 1900, 72. Estimated 1915, 500a

LOCATION

Northern Indiana County, near headwaters of Pine Run, tributary of Crooked Creek; on Buffalo, Rochester & Pittsburgh R. R.

INDUSTRIES

Agriculture; grist and flour mill.

WATER SUPPLY

The Marion Center Water Co., incorporated 1911 for Marion Center borough, from private system of J. H. Rochester, operating since 1894.

SOURCE AND COLLECTION

Spring on side hill 0.33 mile southeast of center of borough, near opening of old coal mine drift; masonry dam forms 400,000 gallon reservoir 75 feet higher than main street.

DISTRIBUTION

By gravity through 0.3 mile 4-inch pipe to Main street; extends 0.2 mile along that street; pressure 45 pounds; 5 fire hydrants, 4-inch.

CONSUMPTION

Supply to about 100 persons; 23 taps. Stated average daily consumption 1,500 gallons all domestic. No means of measurement.

NEW BETHLEHEM AND SOUTH BETHLEHEM BOROUGHS, CLARION AND ARMSTRONG COUNTIES

CITIZENS' WATER COMPANY OF NEW BETHLEHEM

	Population 1910 census	Increase since 1900	Estimated 1915
New Bethlehem,	1,625	356	1,725a
South Bethlehem,	439	256	475a

LOCATION

Adjoining boroughs in southeastern Clarion and northeastern Armstrong counties, respectively, on opposite banks of Red Bank Creek; on Allegheny Valley Division of Pennsylvania R. R. Range in elevation about 135 feet.

INDUSTRIES

Milling company, tile and hollow brick works, glass works, brick works and brewery.

WATER SUPPLY

Citizens Water Co. of New Bethlehem, a merger in 1904 of Citizens Water Co. of New Bethlehem, incorporated 1883 for New Bethlehem Borough, Clarion County, and Red Bank Water Co., incorporated 1901 for South Bethlehem Borough, Armstrong County.

SOURCE AND COLLECTION

By pumping from Red Bank Creek; 8-inch intake pipe from creek 800 feet to pumping station in southwestern part of New Bethlehem Borough; watershed area 50 square miles. Water pumped through 10-inch force main to filter plant consisting of 100,000 gallon Jewell mechanical filter and one 200,000 gallon Ricert mechanical filter in northwestern part of New Bethlehem borough; thence by gravity to two clear water basins, 118,000 and 156,000 gallons, several hundred feet distant. Pumping equipment 720,000 gallon Gould triplex pump; 700,000 gallon Gould triplex pump. Water medium hard.

DISTRIBUTION

By gravity through 1.2 miles 6-inch main, 2.8 miles 4-inch in New Bethlehem, and 0.2 mile 6-inch and 1.7 mile 4-inch in South Bethlehem; pressures 80 to 87 pounds; 28 fire hydrants, 5-inch, 7 in South Bethlehem.

CONSUMPTION

	New Bethlehem	South Bethlehem
Population supplied,	1,500a	125
Domestic taps,	285	61
Industrial taps,	5	----------
Average daily consumption,	180,000	----------
Maximum daily consumption,	225,000	----------
Industrial consumption,	40,000	----------
Meters, domestic,	163	16
Meters, industrial,	5	----------
Metered consumption, domestic,	80,000	8,300
Metered consumption, industrial,	7,400	----------

Consumption measured by pump displacement.

PARKERS LANDING BOROUGH, ARMSTRONG COUNTY

PARKER CITY WATER COMPANY
PRIVATE SUPPLY

Population 1910 census, 1,244; increase since 1900, 174. Estimated 1915, 1,300

LOCATION

Extreme northwestern Armstrong County, between Butler county line and Allegheny River; on Baltimore & Ohio R. R. Built-up portion on hillside above bluff, parallel to and 250 feet from river.

INDUSTRIES

Pumping station of Standard Oil Co. in southern end of borough at mouth of Bear Creek.

WATER SUPPLY

(1) Parker City Water Co., incorporated 1891 for Parker "City" from private works installed in 1872.

(2) Private system of J. S. Brady.

PARKER CITY WATER COMPANY SYSTEM

SOURCE AND COLLECTION

Allegheny River; intake and pumping station in lower end of borough flooded annually; filter crib in river has two 4-inch pipes 230 feet to pump well. Water raised to 210,000 gallon settling basin nearby; flows through one 150,000 gallon mechanical filter unit to 100,000 gallon filtered water tank; pumped through 4-inch force main to 30,000 gallon intermediate service distributing tank and to 40,000 gallon high service distributing tank; 3-inch branch off 4-inch force main at pump station to 27,000 gallon low service distributing tank; each tank filled at different times in day. Pumping installation, 150,000 gallon Deming pump and 25 hp. gas engine.

DISTRIBUTION

By gravity through 1 mile 4-inch supply main. Low service tank 125 feet above pumping station supplies flats; intermediate service tank 208 feet above pumping station supplies district along bluff north of Church Run, under 100-foot head, which can be increased to 175 feet for fire purposes by connection to high service; high service tank 285 feet above pumping station supplies district south of Church Run, known locally as Lawrenceburg.

Distributing mains 1.6 miles 4-inch and 1.6 miles 3-inch and smaller; pressures 40 to 90 pounds; 33 fire hydrants, principally 2-inch.

CONSUMPTION

About 800 persons supplied; 202 taps, 2 industrial. Stated average daily consumption 70,000 gallons, 10% industrial. No means of measurement.

PRIVATE SYSTEM OF J. S. BRADY

Supply from spring on bluff near northern part of borough, former auxiliary supply of Parker City Water Co.; distributed by gravity. No fire hydrants.

INDUSTRIAL

Standard Oil Co. obtains water by pumping from Allegheny River.

REYNOLDSVILLE BOROUGH, JEFFERSON COUNTY

REYNOLDSVILLE WATER COMPANY
(Operated by United Water & Guarantee Co.)

Estimated 1915 population, 4,450a. West Reynoldsville and Prescottville annexed to Reynoldsville in 1914.

LOCATION

Central eastern Jefferson County; Reynoldsville and West Reynoldsville on opposite banks Sandy Lick Creek; Prescottville 1 mile southeast on Solater Run, a branch of Sandy Lick Creek; on Pennsylvania R. R., Reynoldsville & Falls Creek R. R. and Jefferson traction line. Elevations 1,300 to 1,430 feet above sea level.

INDUSTRIES

In agricultural and mining district; tannery, silk mill, glass plant, brick plants, asbestos works and textile works.

WATER SUPPLY

Reynoldsville Water Co., incorporated 1888 for Reynoldsville, Ohiotown and Prescottville; operated by United Water & Guarantee Co.

SOURCE AND COLLECTION

(1) A 10,000,000 gallon storage reservoir 1.5 miles northeast of center of Reynoldsville, on north branch Pitch Pine Run, tributary of Sandy Lick Creek from east; watershed area 60 acres.

(2) A 2,000,000 gallon storage reservoir on East Branch Pitch Pine Run 0.66 mile east from center of borough; 6-inch gravity main, receiving flow from two springs through 3-inch pipe and from two drilled wells pumped by deep well pumps through 6-inch pipes, from upper to lower reservoir.

(3) Emergency supply by pumping from five 6-inch drilled wells, 130 to 300 feet deep by 350,000 gallon air compressor through 6-inch main into lower reservoir; 6-inch and 4-inch force mains also lead from pumps to three tanks, combined capacity 600,000 gallons, on hill 0.25 mile south and 210 feet above pumping station, at elevation 1,460. Pumping equipment two 350,000 gallon Gardiner Gowan pumps, two 100 hp. Meadville boilers.

Minimum flow of springs, 100,000 gallons, of wells, 700,000. Water soft.

DISTRIBUTION

By pumping direct to distributing system through 8-inch and 6-inch mains, and to tanks on hill through 6-inch and 4-inch mains; pressures 80 to 125 pounds. Distributing mains as follows:

				Less than	
Size (inches),	8	6	4	4	Total
Length (miles),	0.4	5.1	7.3	3.2	16.0
Per cent.,	2	32	46	20	100

Fifty-two fire hydrants, 4-inch.

CONSUMPTION

Supply to 3,540 persons; 861 taps, 20 metered. Average daily consumption 500,000 gallons, 100,000 industrial; maximum 600,000 gallons. Metered consumption 10,000 gallons daily industrial and 750 gallons domestic. Supplies Reynoldsville & Falls Creek R. R. with 26,000 gallons daily. Pennsylvania R. R. takes water occasionally. Furnishes domestic supply to Elk Tanning Co.'s houses.

INDUSTRIAL

Elk Tanning Co. obtains industrial supply by gravity from springs and by pumping from drilled wells at works through 4-inch main to 70,000 gallon reservoir. Average daily consumption 300,000 gallons.

RIDGWAY BOROUGH, ELK COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 5,408; increase since 1900, 1,893. Estimated 1915, 6,300b

LOCATION

County seat, central Elk County, on Clarion River; on Pennsylvania R. R. and Buffalo, Rochester & Pittsburgh R. R.

INDUSTRIES

Tanneries, dynamo and engine works, machine and tool works, car and snow plow works, brick works, planing mill and a machinery manufacturing company.

WATER SUPPLY

Municipal works built 1890; source changed 1908. Elk Tanning Co. has private system.

SOURCE AND COLLECTION

Big Mill Creek, tributary of Clarion River from north; intake and pumping station 2 miles west of borough and 2.5 miles above mouth of creek; watershed area 30 square miles. Dam forms storage reservoir; 16-inch pipe to 69,000 gallon settling basin; water flows through filters, capacity 1,000,000 gallons daily, to 30,000 gallon filtered water basin. Two 375,000 gallon Oliver pumps and one 750,000 gallon Ramsay triplex pump lift water from 16-inch suction through 12-inch force main direct to distributing system.

DISTRIBUTION

By pumping direct to system with connection to 346,500 gallon equalizing reservoir on hill 1.5 miles east of center of borough; pressure 120 pounds.

CONSUMPTION

Supply to 5,000 people; 1,020 domestic and 5 industrial taps. Average daily consumption 850,000 gallons. Supplies "Eagle Valley" tannery of Elk Tanning Co. with 100,000 gallons daily, in addition to their private supply.

INDUSTRIAL

"Eagle Valley" tannery uses 600,000 gallons daily, 100,000 gallons supplied by municipal works and remainder by pumping from

two wells through 4-inch and 3-inch pipes to tannery. Domestic supply to company houses from municipal system.

"Ridgway" tannery uses 150,000 gallons daily, of which small amount is domestic supply from springs. Industrial supply pumped from Aylesworth Run and two wells through 5-inch and 2-inch pipes to 24,000 gallon reservoir. Municipal works furnish fire protection only.

Extract works of Elk Tanning Co. use 950,000 gallons daily, obtained by pumping from Clarion River through condensers and back to river.

RIMERSBURG BOROUGH, CLARION COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 855; increase since 1900, 368. Estimated 1915, 1,500

LOCATION

Southern Clarion County, on ridge between Wildcat Run, tributary of Red Bank Creek, and Cherry Run, tributary of Clarion River; on Pennsylvania R. R.

INDUSTRIES

In coal mining district; some agriculture.

WATER SUPPLY

Municipal works installed in 1909.

SOURCE AND COLLECTION

Two drilled wells Nos. 3 and 4, on hillside in western part of borough. Well No. 4 is 10-inch diameter, 98 feet deep, pumped by Gould deep well pump, belt-connected to 6 hp. Fowler gasoline engine; 6-inch suction and 4-inch force main 440 feet to distributing system on Main Street. Well No. 3 is 10-inch diameter, 77 feet deep, pumped by 25 g. p. m. Gould deep well pump operated by gasoline engine. Water medium hard.

DISTRIBUTION

By pumping direct to system through 6-inch main connected to 60,000 gallon elevated equalizing tank near pumping station. Distributing and supply mains 0.8 mile 6-inch and 4-inch pipes; pressure about 70 pounds; 14 fire hydrants.

CONSUMPTION

About 300 persons supplied; 56 taps, all metered. Average daily consumption 2,200 gallons, all domestic; 7 gallons per capita, due to restrictions imposed on account of scarcity of supply.

COST AND REVENUE

Total cost of works, $14,000; annual operating expenses, $600; gross revenue, $950.

ROSSITER (CANOE TWP.), INDIANA COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 2,500

LOCATION

Northeastern Indiana County, on tributary of Canoe Creek, tributary to Mahoning Creek; on New York Central & Hudson River R. R.

INDUSTRIES

Mines of Clearfield Bituminous Coal Co.

WATER SUPPLY

Private system owned by coal company.

SOURCE AND COLLECTION

Water pumped from two drilled wells 280 feet deep, with 10-inch casing below coal, which lies about 75 feet under surface; 6-inch force main to 12,000 gallon distributing reservoir on hillside west of village. Pumps at each well; Carpenter at one, Canton at other.

DISTRIBUTION

By gravity through 6-inch main. Water for boiler purposes filtered by Scaife filter plant to eliminate sulphur. In wet seasons

boiler water secured from small stream, not needing treatment, at southern end of plant.

CONSUMPTION

Supply to 250 houses of company; one hydrant to each block of houses, and 25 houses with one hydrant each. Consumption not known; assuming 30 gallons per capita, it would be 45,000 gallons daily domestic.

RURAL VALLEY BOROUGH, ARMSTRONG COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 763; incorporated in 1900. Estimated 1915, 1,000a

LOCATION

Eastern Armstrong County, along Cowanshannoc Creek; on Rural Valley R. R., station Yatesboro, just west of borough. Range of elevation in district supplied, 1,094 to 1,152 feet above sea level.

INDUSTRIES

Agriculture; planing mill.

WATER SUPPLY

Municipal works built in 1906.

SOURCE AND COLLECTION

Drilled well, 8 inches by 400 feet in valley of Cowanshannoc Creek, at lower end of borough; water raised by air lift to 10,000 gallon tank; pumped through 0.2 mile 2-inch pipe to 25,000 gallon wooden tank, at western end of borough, at elevation 1,310; minimum daily yield, 30,000 gallons. Pumping equipment a triplex pump, 22 hp. Bessemer gas engine and an air compressor; pump at elevation 1,119. Water soft.

DISTRIBUTION

By gravity through 1.0 mile 6-inch main and 0.8 mile 4-inch; pressures 70 to 100 pounds; 15 fire hydrants, 4-inch.

CONSUMPTION

About 600 persons supplied; 126 taps, all metered. Stated average daily consumption 10,000 gallons; maximum 12,000 gallons, all domestic.

COST AND REVENUE

Total cost of works, $13,000; annual operating expenses, $725; gross revenue, $980.

INDUSTRIAL

McKelvey & Peters planing mill has private supply for works; source of supply not known; supplies two families.

SAGAMORE (COWANSHANNOC TWP.), ARMSTRONG COUNTY

BUFFALO AND SUSQUEHANNA COAL AND COKE COMPANY

Estimated 1915 population, 2,500

LOCATION

Central eastern Armstrong County, on North Branch Plum Creek, tributary of Crooked Creek; on Buffalo & Susquehanna R. R.

INDUSTRIES

Mining operations of Buffalo & Susquehanna Coal & Coke Co.

WATER SUPPLY

Private supply of coal and coke company. (1) Industrial supply from 5,000,000 gallon dam on Plum Creek; supply sufficient except during dry periods. Delivered by gravity. (2) By pumping from artesian wells, about 100 feet deep, 0.5 mile south of village; used for domestic and industrial purposes.

Stated average daily consumption 24,000 gallons daily domestic and 12,000 gallons per hour for steam purposes. No means of measurement.

ST. MARYS BOROUGH, ELK COUNTY

ST. MARY'S WATER COMPANY

Population 1910 census, 6,346; increase since 1900, 2,051. Estimated 1915, 7,000

LOCATION

East central Elk County, near headwaters of Elk Creek; on Pennsylvania R. R. and Pittsburgh, Shawmut & Northern R. R.

INDUSTRIES

Fire-proofing works, sewer pipe works, chemical works, graphite works, carbon works, tannery, battery companies, two breweries, saw mill, stave company, and shops of Pittsburgh, Shawmut & Northern R. R.

WATER SUPPLY

St. Marys Water Co., incorporated 1889 for St. Marys Borough.

SOURCE AND COLLECTION

(1) Silver Creek, tributary of Elk Creek; 500,000 gallon intake dam and pumping station No. 1, 1.5 miles northwest of center of borough; watershed area 999 acres. Five drilled wells on banks of creek at dam; water usually flows into reservoir, but in dry seasons pumped by compressed air. Water pumped from intake through 0.9 mile 6-inch force main to two 150,000 gallon covered reservoirs on hill in northwest corner of borough, about 190 feet above lowest point supplied. Pumping equipment 380,000 gallon Fairbanks-Morse steam pump, 8-inch suction, 380,000 gallon Stillwell Pierce & Smith-Vaile pump; air compressor.

(2) Laurel Run, tributary of Elk Creek from southwest; 4,000,000 gallon intake dam and pumping station No. 2, 3.12 miles south of borough; watershed area 1,090 acres. Six flowing wells near intake, pumped during dry seasons by compressed air. Water pumped through 2.5 miles 6-inch force main to 2,000,000 gallon reservoir on hill at southern limits of borough, about 220 feet above lowest point supplied. Pumping equipment 864,000 gallon Gould triplex pump, 8-inch suction; 500,000 gallon Gould triplex pump, 8-inch suction; air compressor.

(3) Wolf Lick Run, tributary of Spring Run, tributary of Sinnemahoning Creek, in Upper West Branch Sub-basin (Section No. 6); 10,000,000 gallon reservoir and pumping station No. 3, 5.5 miles southeast of borough; watershed area 2,100 acres. Six drilled wells

usually flow to reservoir, but in dry seasons water is pumped by compressed air. Water pumped, against head of 390 feet, through 4.5 miles 8-inch force main to 2,000,000 gallon reservoir near southeastern corner of borough, about 220 feet above lowest part of district supplied; 6-inch balancing pipe between distributing reservoir and 6-inch line from Laurel Run pumping station. Pumping equipment 936,000 gallon Gould pump; air compressor. Water soft; that pumped from wells medium hard.

DISTRIBUTION

By gravity through 4.6 miles 8-inch and 4 miles 6-inch supply mains. Distributing mains as follows:

Size (inches),	8	6	5	4	2 and 1¼	Total
Length (miles),	0.4	3.7	0.1	9.2	0.9	14.3
Per cent.,	3	(27)		64	6	100

Pressures 20 to 80 pounds; 61 fire hydrants, 4-inch.

Arrangements with St. Marys Tannery Co., Kaul & Hall Lumber Co., Pennsylvania Stave Co., M. J. Corbett & Co., Elk County Brewing Co., whereby emergency supply for fires or dry seasons can be pumped into system from drilled wells.

CONSUMPTION

Supply to 7,000 people; 1,056 domestic and 17 industrial taps. Average daily consumption, measured by pump displacement, 1,500,000 gallons, maximum 1,600,000; 66% domestic and 34% industrial; 63 taps metered, 17 industrial; metered consumption 495,000 gallons daily industrial and 21,000 domestic.

Graphite, carbon, battery, Pennsylvania R. R. and Pittsburgh, Shawmut & Northern R. R. companies receive entire supply from water company.

INDUSTRIAL

Fire-proofing company, sewer pipe company, stave company, chemical company, saw mill, tannery and two breweries have private supplies obtained by pumping from drilled wells, in addition to water furnished by water company; consumption not known.

ST. PETERSBURG BOROUGH, CLARION COUNTY

ST. PETERSBURG WATER COMPANY

Population 1910 census, 453; decrease since 1900, 29. Estimated 1915, 450a

LOCATION

Clarion County, near Clarion River, a few miles above mouth of Allegheny River; on Baltimore & Ohio R. R. Range of elevation 1,205 to 1,355 feet above sea level.

INDUSTRIES

Agriculture; oil production.

WATER SUPPLY

St. Petersburg Water Co., incorporated 1882 for St. Petersburg borough from municipal system operating since 1872.

SOURCE AND COLLECTION

Spring and three drilled wells, each over 400 feet deep, 0.75 mile north of borough, at elevation 1,400 feet. Wells pumped by three deep well pumps; 2-inch suctions and 3¼-inch discharge into small reservoir over spring; pumped through 4¼-inch pipe to two 50,000 gallon tanks nearby at elevation 1,375. Pumping installation three 20,000 gallon deep well pumps, 80,000 gallon Deming pump; 15 hp. Bessemer gas engine. Water medium hard.

DISTRIBUTION

By gravity through 1.6 miles 4-inch and 3-inch mains; pressures 5 to 75 pounds; 21 fire hydrants, 2-inch.

CONSUMPTION

About 430 people supplied; 135 taps. Stated average daily consumption 1,000 gallons; maximum 1,500 gallons; all domestic. No means of measurement.

SHIPPENVILLE BOROUGH, CLARION COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 378; increase since 1900, 65. Estimated 1915, 400

LOCATION

Northwestern Clarion County, on ridge between Deer Creek, on west and tributary of Paint Creek on east; on Franklin Division of Lake Shore & Michigan Southern Ry. and Baltimore & Ohio R. R. Range in elevations in district supplied 1,290 to 1,407 feet.

INDUSTRIES

Oil and gas district.

WATER SUPPLY

Municipal water works built in 1913.

SOURCE AND COLLECTION

An 8-inch drilled well, 255 feet deep, on hilltop near eastern border of borough, elevation 1,407. Water pumped by Myers deep-well pump, belt-connected to 15 hp. producer gas engine; 4-inch discharge 25 feet to 25,000 gallon cypress storage tank. Water medium hard.

DISTRIBUTION

By gravity through 0.9 mile 6-inch and 0.1 mile 4-inch mains; pressure 30 pounds; no fire hydrants.

CONSUMPTION

Stated average daily consumption 1,000 gallons domestic, entirely metered.

COST AND REVENUE

Total cost of works, $5,000; operating expenses, $180; gross revenue, $275.

SLIGO BOROUGH, CLARION COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 754; increase since 1900, 249. Estimated 1915 900b

LOCATION

Southwestern Clarion County, along both banks of Licking Creek, tributary of Clarion River; on Allegheny Valley Division of Pennsylvania R. R. Built-up section lies in fork between Licking and Little Licking creeks.

INDUSTRIES

Fire brick plant, two bituminous coal mines now idle.

WATER SUPPLY

Municipal works installed in 1911.

SOURCE AND COLLECTION

A 6-inch drilled well, 313 feet deep, in east central part of borough, 160 feet above built-up section; capacity 60 g. p. m. Water raised by deep well pump belt-connected to 6 hp. gas engine through 2½-inch force main 20 feet to 29,000 gallon distributing reservoir.

DISTRIBUTION

By gravity through 6-inch main 2,000 feet long; about 0.5 mile of 2-inch and 4-inch distributing mains; 7 fire hydrants.

CONSUMPTION

Supply to 150 people through 13 taps. Average daily consumption not known; assuming 30 gallons per capita would be 4,500 gallons.

SUMMERVILLE BOROUGH, JEFFERSON COUNTY

PEOPLE'S WATER COMPANY OF SUMMERVILLE
PRIVATE SUPPLY

Population 1910 census, 609; increase since 1900, 229. Estimated 1915, 1,000

LOCATION

Central western Jefferson County, along Red Bank Creek; on Pennsylvania R. R.; terminus of Pennsylvania Southern R. R.

INDUSTRIES

Agriculture and mining.

WATER SUPPLY

(1) People's Water Co. of Summerville, incorporated 1903 for Summerville borough.

(2) Private system of Dr. Havens, Brookville.

PEOPLE'S WATER COMPANY OF SUMMERVILLE

SOURCE AND COLLECTION

Limestone spring in southeast corner of borough; water piped through 4-inch pipe to 57,600 gallon tank nearby. Flow of spring, except in dry seasons, 43,000 gallons daily.

Auxiliary drilled well, 335 feet deep, about 50 feet northwest of spring, pumping station over it used in dry seasons. A 36,000 gallon American duplex deep well pump, driven by 6 hp. Columbus gas engine, lifts water through 3-inch pipe to tank. Water medium hard.

DISTRIBUTION

By gravity through 3 miles 4-inch and 3-inch mains; pressures 40 to 74 pounds; 6 fire hydrants, 2½-inch.

CONSUMPTION

Supply to 375 persons; 76 taps. Stated maximum daily consumption, estimated by pump displacement, 28,000 gallons, all domestic. No meters.

PRIVATE SYSTEM OF DR. HAVENS

Water from spring in borough distributed by gravity; supplies 60 persons through 12 taps; average consumption 1,800 gallons daily, assuming 30 gallons per capita.

SYKESVILLE BOROUGH, JEFFERSON COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,756; incorporated in 1902. Estimated 1915, 1,800b

LOCATION

Southeastern Jefferson County, on Stump Creek, tributary of Mahoning Creek, near Clearfield County line; on Buffalo, Rochester & Pittsburgh R. R., United Traction Street Ry. and Jefferson traction line.

INDUSTRIES

Mines of Cascade Coal and Coke Co.

WATER SUPPLY

Municipal water works. Cascade Coal & Coke Co. has private supply for operations and properties.

SOURCE AND COLLECTION

Two 8-inch drilled wells, 208 and 226 feet deep, on hillside in borough. Water raised by 38 g. p. m. deep well pump, electrically operated, over each well; discharge to receiving basin; pumped by two 75 g. p. m. centrifugal pumps direct to system.

DISTRIBUTION

By pumping direct to distributing mains, with connection to 80,000 gallon equalizing reservoir on hilltop. Distributing mains 2.3 miles, 4-inch to 8-inch.

CONSUMPTION

Supply to 1,000 people. Average daily consumption not known; assuming 40 gallons per capita would be 40,000 gallons.

WALSTON (YOUNG TWP.), JEFFERSON COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 800

LOCATION

Southern Jefferson County, on Sawmill Run, tributary of Mahoning Creek; just north of Greater Punxsutawney; on Buffalo, Rochester & Pittsburgh R. R.

INDUSTRIES

Mines and coke ovens of Rochester and Pittsburgh Coal and Iron Company.

WATER SUPPLY

Private system of coal and iron company installed in 1885.

SOURCE AND COLLECTION

Four drilled wells, averaging 300 feet deep, in valley a short distance west of village. Water raised by air lift to 300 gallon tank at pumping station; pumped by 288,000 gallon Cameron pump, with 6-inch suction through 4-inch force main to system.

DISTRIBUTION

By pumping direct to system with 4-inch connection to 15,000 gallon equalizing reservoir on hill in center of village; pressure 80 pounds.

CONSUMPTION

Supply to 800 people through outside hydrants and taps. Separate system for mine supply.

INDUSTRIAL SUPPLY

Intake in Mahoning Creek, in western part of Greater Punxsutawney Borough. Pumping station contains one 1,440,000 gallon Vulcan pump, with 8-inch suction and 6-inch discharge and one 1,000,000 gallon Laidlow-Dunn-Gordon pump with 6-inch suction and 6-inch discharge. Water pumped against head of 125 feet to three 20,000 gallon tanks at coke ovens, and to three tanks, capacity of one 30,000 and of two 20,000 gallons each, at mines in Walston. Chemical filter plant, capacity 120,000 gallons daily, at three tanks on hillside above boiler house; 4-inch gravity main from tanks. Average daily con-

sumption 225,000 gallons, 100,000 used by boilers at Mines Nos. 1 and 3 and 125,000 by coke ovens. Fire protection provided by pumping stations on Mahoning and Saw Mill creeks; 5-inch and 8-inch intakes; two Cameron pumps, one giving 100 pounds pressure, 432,000 gallons capacity daily.

YATESBORO (COWANSHANNOC TWP.), ARMSTRONG COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 3,000

LOCATION

Eastern Armstrong County, along Cowanshannoc Creek, tributary of Allegheny River, and just west of Rural Valley Borough; on Rural Valley R. R.

INDUSTRIES

Mines and coke ovens.

WATER SUPPLY

Private system installed by Cowanhannoc Coal & Coke Co., in 1900.

SOURCE AND COLLECTION

Three 6-inch drilled wells 300 feet deep in valley of creek; water raised by air lift into two 8,500 gallon tanks at wells; pumped through 4-inch force mains to two wooden distributing tanks on hilltop on each side of creek. Auxiliary supply in dry seasons from six other drilled wells.

DISTRIBUTION

By gravity through 6-inch and 4-inch mains; pressure 65 pounds.

CONSUMPTION

Supply on south side of creek to 100 street hydrants and on north side to 50 taps.

SECTION No. 18.

OHIO RIVER

LOWER ALLEGHENY SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

Table of Industrial Water Supplies (Coal Companies)

SECTION No. 18.

OHIO RIVER—LOWER ALLEGHENY SUB-BASIN.

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section is in the southwestern part of Pennsylvania, south of the Middle Allegheny, and north of the Monongahela, Sub-basin. It is about 75 miles long northwest and southeast, varies from 15 to 40 miles in width and has an area of 2,381 square miles, drained by the Allegheny River from its junction with Monongahela River to the mouth of and including the Kiskiminitas River. It includes large portions of Allegheny, Westmoreland, Indiana, Cambria and Somerset counties and small portions of Butler and Armstrong counties. The city of Pittsburgh is included in this section.

SURFACE CHARACTERISTICS

In the Allegheny plateau region, the southeastern boundary being the escarpment of the plateau. Two ridges in the central and western part parallel the escarpment. Most of the territory drains to the west through the Kiskiminitas River and its tributaries; the river traverses nearly the entire length of the section, emptying into the Allegheny at Freeport about 25 miles northeast of Pittsburgh. A small area west of the Allegheny River drains south and west through smaller streams into the main river. The principal tributaries are the Kiskiminitas River from the east and Big Buffalo Creek from the north.

POPULATION

The population in 1910 was nearly 924,000, an increase of 29% since 1900. The density of population is 386 per square mile (including Pittsburgh City), varying from 78 in Somerset County to 2,530 in Allegheny County. The urban population is 75%.

RESOURCES AND INDUSTRIES

Great centers of the iron and steel industry are,—Pittsburgh, in the western part, the fifth largest city in the United States, with estimated population, in 1915, of nearly 572,000, and Johnstown

in the eastern part, with population, in 1915, of 70,000. Next in importance is bituminous coal mining and the coke industry. Some oil and gas are found in the eastern part. Agriculture forms an important industry over the whole section.

WATER SUPPLY

The streams east of Johnstown are extensively utilized for water supply by the Cambria Steel Co. in its industrial plants near Johnstown, for Johnstown City, the Pennsylvania R. R. (Summit Water Supply Co.), and for numerous small communities. The steel company has several large storage reservoirs, that on Quemahoning Creek being the largest in the State, with 10,922,000,000 gallons capacity. This district has a total consumption of from 120,000,000 to 130,000,000 gallons daily. Between Johnstown and the Allegheny River there are numerous small scattered systems. Some of the streams in this section are polluted more or less by coal wastes so that purification would be necessary to make their water suitable for use.

On the Allegheny there are, in addition to Pittsburgh, numerous busy industrial communities that pump water from the river and filter it before use.

West of the Allegheny River this section is comparatively lightly populated, and there are several streams which are unused for water supply. Many small communities at a distance from the main rivers have gravity supplies, exclusive of the two large public and industrial systems for the city of Johnstown. Of the total consumption in this section, two-thirds is pumped and one-third is by gravity, the major part of that which is pumped being from the Allegheny River, while that supplied by gravity comes largely from the Conemaugh and tributaries in vicinity of Johnstown.

The aggregate population served by water supply systems is slightly over 862,000.

The largest municipal system is that of the city of Pittsburgh. The water for the municipal plant is pumped entirely from the Allegheny River and filtered. There are 13 other (14 total) municipal plants in this section out of a total of 59 boroughs and 2 cities having public supplies. In six instances incorporated companies operate systems for public water supply in more than one borough, three of them controlled by interests connected with other water supply systems in the State and two controlled by industrial concerns.

One important water company furnishes water solely for industrial purposes, except as it may incidentally be called on to help another system in emergency. This is the Manufacturers Water Co., owned by the Cambria Steel Co., which also owns a controlling interest in the Johnstown Water Co., supplying Johnstown and vicin-

ity. The consumption supplied by the Manufacturers Water Co.'s system averages 92,000,000 gallons daily.

Other large industrial users of water are the Carnegie Steel Co., 25,000,000 gallons daily; The American Steel & Wire Co., 14,000,000 gallons daily; American Sheet and Tin Plate Co., 14,000,000 gallons daily; and the Allegheny Steel Co., 4,000,000 gallons daily; all of which draw from the Allegheny River. About 90% of the water used by these concerns is returned to the river and used over and over by other plants in succession along the stream. The temperature of the water is raised from 10 to 50 degrees in passing through a plant.

The Josephine Coke and Furnace Co., in the central portion of the section uses an average of 6,000,000 gallons daily from Black Lick Creek and wells.

The total consumption of which record has been received amounts to over 338,500,000 gallons, divided equally between public systems and private industrial works. Of the latter, nearly 11,000,000 gallons are used by railroads, more than 3,000,000 gallons by coal mining companies and the remainder by miscellaneous industries largely steel and iron. The railroad use of water is the fourth largest in the State; of the total daily consumption of 11,000,000 gallons, 8,700,000 gallons come from privately owned systems.

The following tables give a summary of the water supplies in this section, both domestic and industrial, after which are detailed descriptions of the water supply systems arranged alphabetically according to places supplied:

Place	County	Company	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Acmetonia,	Allegheny, Harmar Twp.,	Private, Chris. Mardorf,	250	100							1
Allegheny County Work House	Allegheny, O'Harra Twp.,	Private,	(1,000)	(1,000)							
Allison Park,	Allegheny, Hampton Twp.,	Allison Park W. Co.,	500	75						1	
Apollo,	Armstrong & Westmoreland,	Apollo W. W. Co. (Pennsylvania W. Co. Leechburg W. W. Co. (Pennsylvania W. Co.)	7,500	7,000			1				
Leechburg,	Armstrong & Westmoreland,										
West Apollo,	Armstrong & Westmoreland, Washington Twp.										
Paulton,	Armstrong & Westmoreland, Washington Twp.										
Aspinwall,	Allegheny,	Municipal,	3,600	3,000				1			
Avonmore,	Westmoreland,	Municipal,	1,300b	550				1			
Baggaley,	Westmoreland, Unity Twp.,	Puritan W. Co. (H. C. Frick Coke Co.)	765	765						1	
Beaverdale,	Cambria, Adams Twp.,	Summit W. S. Co. (Pennsylvania R. R. Co.)	1,000b	800						1	
Benson,	Somerset,	Private, W. A. Snably,	500	215					1		
		Private, S. P. Berkebile,		150					1		
Blairsville,	Indiana,	Municipal,	3,600b	3,600b				1			
Bolivar,	Westmoreland & Indiana,	Mace Springs W. Co. of Bolivar,	750b	700			1				
Garfield,	Westmoreland & Indiana, West Wheatfield Twp.										
West Bolivar,	Westmoreland & Indiana, Fairfield Twp.										
Cairnbrook,	Somerset, Shade Twp.,	Cairnbrook W. Co.,	350	350						1	
Cassandra,	Cambria,	Private, Cassandra W. Co.,	350b	100b					1		
Cheswick,	Allegheny,	Cheswick W. Co.,	300a	300			1				
Clymer	Indiana,	Private,	3,000	700					1		
Colfax,	Allegheny, Springdale Twp.,	Private, B. L. Elliott,	300	200							1
Colver,	Cambria, Cambria Twp.,	Colver W. Co.,	3,000	2,500						1	
Cresson,	Cambria,	Municipal,	1,800	1,500b				1			
		Cresson W. Co.,		100			1				
		Rebecca W. Co.,		20			1				
		Private, Luther A. O'Brien,		45					1		
Derry,	Westmoreland,	Derry W. Co.,	3,250	3,550			1				
Derry Twp. (part),	Westmoreland,										

East Conemaugh,	Cambria,	Conemaugh & Franklin W. Co.,	9,200	9,200			1				
Franklin,	Cambria,						—				
Ebensburg,	Cambria,	Municipal,	2,000	1,800				1			
Etna,	Allegheny,	Municipal,	5,830	4,000				1			
Freeport,	Armstrong,	Freeport W. W. Co.,	2,700	2,000			1				
Greenwald,	Westmoreland, Salem Twp.,	Donohoe W. Co.,	500	500						1	
Heilwood,	Indiana, Pine Twp.,	Pine Township W. Co., Possom Glory W. Co.	2,500	2,300						1	
Hooversville,	Somerset,	Hooversville W. Co.,	1,800	1,000			1				
Indiana,	Indiana,	Clymer W. Co. of Indiana,	6,500	5,600			1				
Johnstown,	Cambria,										
Dale,	Cambria,										
Daisytown,	Cambria,	Johnstown W. Co.,	78,800	66,700	1						
Ferndale,	Cambria,										
Rosedale,	Cambria,										
Westmont,	Cambria,										
Johnstown,	Cambria,	Morrellville & Cambria Borough W. Co.		1,200	1						
		The Walnut Grove W. Co.,		125	1						
		Private, Moses Weaver,		250	1†						
Josephine,	Indiana, Blacklick Twp.,	Josephine W. Co.,	1,000	1,000						1	
Latrobe,	Westmoreland,										
Bradenville,	Westmoreland, Derry Twp.,										
Dorothy,	Westmoreland, Derry Twp.,										
Loyalhanna,	Westmoreland, Derry Twp.,	Latrobe W. Co. (National W. Wks. & Guarantee Co.	9,900	9,900			1				
McChesneytown,	Westmoreland, Derry Twp.,										
Snydertown,	Westmoreland, Derry Twp.,										
West Latrobe,	Westmoreland, Derry Twp.,										
Ligonier,	Westmoreland,	Municipal,	2,000	1,900				1			
Lilly,	Cambria,	Summit W. S. Co. (Pennsylvania R. R. Co.	1,700b	1,700b			1				
Millerstown,	Butler,	Private, H. A. Leopold,	1,300	1,000					1		
Millvale,	Allegheny,	Municipal,	9,000	9,000				1			
Natrona,	Allegheny, Harrison Twp.,	Natrona W. Co.,	7,000	7,000						1	
Birdville,	Allegheny, Harrison Twp.,									—	
Nanty-Glo,	Black Lick & Jackson Twps.,	Cambria W. S. Co.,	3,500b							1	
		Private, M. & E. C. Davis,		700							1
New Florence,	Westmoreland,	Municipal,	750	725				1			
New Kensington,	Westmoreland,	Kensington W. Co.,	13,721	13,721			1				
Arnold,	Westmoreland,						—				
Parnassus,	Westmoreland,						—				
Oakmont,	Allegheny,										
North Bessemer,	Allegheny, Penn Twp.,	Suburban W. Co. of Allegheny,	8,000	8,000			1				
Verona,	Allegheny,										
Unity,	Allegheny, Plum Twp.,										
Pittsburgh,	Allegheny,	Municipal,	571,984x	521,150	†	1					
Portage,	Cambria,										
Martindale,	Cambria, Portage Twp.,	Portage W. Co.,	6,300	4,535			1				
Springhill,	Cambria, Portage Twp.,										
Trout Run,	Cambria, Portage Twp.,										

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 18—Continued

Place	County	Company	Population 1915	Population Supplied	City Company	City Municipal	Borough Company	Borough Municipal	Borough Private	Village Company	Village Private
Rankin,	Allegheny,	Municipal,	7,500	7,500	§			1			
Saltsburg,	Indiana,	Municipal,	1,300	1,100				1			
Sharpsburg,	Allegheny,	Municipal,	8,843x	10,000				1			
Sonman,	Cambria, Portage Twp.,	Bens Creek W. Co.,	1,221	1,200						1	
Bens Creek,	Cambria, Portage Twp.,										
Shoemaker,	Cambria, Portage Twp.,										
South Fork,	Cambria,	South Fork W. Co.,	7,000	7,000			1				
Springdale,	Allegheny,	Municipal,	2,500	1,000				1			
Starford,	Indiana, Green Twp.,	Private, S. B. Glassford,	750	20							1
Stoyestown,	Somerset,	Stoyestown W. Co.,	375	200			1				
Summerhill,	Cambria,	Cambria County W. S. Co.,	1,400b	1,400			1				
Ehrenfeld,	Cambria, Croyle Twp.,									—	
Tarentum,	Allegheny,	Allegheny Valley W. Co.,	16,000	16,000			1				
Brackenridge,	Allegheny,										
Creighton,	Allegheny, East Deer Twp.,										
Glassmere,	Allegheny, East Deer Twp.,										
Hites,	Allegheny, East Deer Twp.,										
Twin Rocks,	Cambria, Black Lick Twp.,	Marie W. Co.,	1,500	1,500						1	
Vandergrift,	Westmoreland,	Vandergrift W. Co.,	12,200	11,494			1				
E. Vandergrift,	Westmoreland,										
N. Vandergrift,	Westmoreland, Parks Twp.,										
Park Plan,	Westmoreland, Allegheny Twp.,										
Vandergrift Hts.,	Westmoreland,										
Vintondale,	Cambria,	Black Lick W. Co. and Jackson W. Co.	1,500	1,500			1				
Wehrum,	Indiana, Buffington Twp.,	Buffington W. Co., East Wheatfield W. Co.	600	600						1	
Wilkinsburg,	Allegheny,	Pennsylvania W. Co.,	22,400	93,800			1				
East Pittsburgh,	Allegheny,		6,800				—				
Edgewood,	Allegheny,		3,300				—				
North Braddock,	Allegheny,		14,400				—				
Pitcairn,	Allegheny,		6,600				—				
Pittsburgh, 13th Ward,	Allegheny,		(12,400)		†						
Swissvale,	Allegheny,		10,200				—				
Turtle Creek,	Allegheny,		5,500				—				
Wilmerding,	Allegheny,		7,000				—				
Townships in district,	Allegheny,		5,200								

Windber,	Somerset,	Windber Water & Power Co.,	10,900	7,000	------	------	1	------	------	------	------
Berwindo,	Somerset, Paint Twp.,										
Paint,	Somerset,										
Scalp Level,	Cambria,										
Seanor,	Somerset, Paint Twp.,										

aEstimated by water companies.
bEstimated by Water Supply Commission.
xU. S. Census.
‡Private supply.
§Purchases water from Penna. Water Co.
†Pittsburgh supplied by 1 municipal works and 2 companies, viz: Pennsylvania Water Co., listed in Section 18; South Pittsburgh Water Co., listed in Section 19.

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 18—Continued

Place	County	Company	Supply: Source: Surface	Supply: Source: Ground	Supply: Source: Combined	Supply: Method: Gravity	Supply: Method: Pumped	Supply: Method: Combined	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Acmetonia,	Allegheny, Harmar Twp.,	Private, Chris. Mardorf,	---	1	---	1	---	---	1,300a	---	1,300a	---
Allegheny County Work House	Allegheny; O'Harra Twp.,	Private,	---	---	---	---	---	---	410,000a	---	410,000a	---
Allison Park,	Allegheny, Hampton Twp.,	Allison Park W. Co.,	---	1	---	---	1	---	300a	---	300a	---
Apollo,	Armstrong & Westmoreland,	Apollo W. W. Co. (Pennsylvania W. Co. Leechburg W. W. Co. (Pennsylvania W. Co.	1	---	---	---	1	---	---	---	424,000	61t
Leechburg,	Armstrong & Westmoreland,											
West Apollo,	Armstrong & Westmoreland, Washington Twp.											
Paulton,	Armstrong & Westmoreland, Washington Twp.											
Aspinwall,	Allegheny,	Municipal,	---	1	---	---	1	---	109,500	46,900	156,400	52t
Avonmore,	Westmoreland,	Municipal,	---	1	---	---	1	---	50,000	6,000	56,000	100t
Baggaley,	Westmoreland, Unity Twp.,	Puritan W. Co. (H. C. Frick Coke Co.)	1	---	---	1	---	---	19,200a	214,400a	233,600a	---
Beaverdale,	Cambria, Adams Twp.,	Summit W. S. Co. (Pennsylvania R. R. Co.)	1	---	---	1	---	---	---	---	70,000a	---
Benson,	Somerset,	Private, W. A. Snably,	---	1	---	1	---	---	3,000a	---	3,000a	---
		Private, S. P. Berkebile,	---	1	---	1	---	---	1,800a	---	1,800a	---
Blairsville,	Indiana,	Municipal,	---	1	---	---	1	---	---	---	1,000,000	---
Bolivar,	Westmoreland & Indiana,	Mace Springs W. Co. of Bolivar,	1	---	---	1	---	---	20,000b	30,000b	50,000b	---
Garfield,	Westmoreland & Indiana, West Wheatfield Twp.											
West Bolivar,	Westmoreland & Indiana, Fairfield Twp.											
Cairnbrook,	Somerset, Shade Twp.,	Cairnbrook W. Co.,	---	1	---	---	1	---	17,500a	500a	18,000a	---
Cassandra,	Cambria,	Private, Cassandra W. Co.,	---	1	---	1	---	---	1,000b	---	1,000b	---
Cheswick,	Allegheny,	Cheswick W. Co.,	---	1	---	---	1	---	5,000	---	5,000	17d
Clymer	Indiana,	Private,	---	1	---	1	---	---	4,500a	---	4,500a	---
Colfax,	Allegheny, Springdale Twp.,	Private, B. L. Elliott,	---	1	---	1	---	---	2,100a	4,900a	7,000a	---
Colver,	Cambria, Cambria Twp.,	Colver W. Co.,	1	---	---	---	1	---	50,000a	---	50,000a	---

Cresson,	Cambria,	Municipal,	1			1			*		44,000	
		Cresson W. Co.,		1		1			3,000b		3,000b	
		Rebecca W. Co.,		1		1			500b		500b	
		Private, Luther A. O'Brien,		1			1		1,000b		1,000b	
Derry,	Westmoreland,	Derry W. Co.,			1	1			175,000a	175,000a	350,000a	
Derry Twp. (part),	Westmoreland,											
East Conemaugh,	Cambria,	Conemaugh & Franklin W. Co.,			1			1	364,900	17,600	382,500	59t
Franklin,	Cambria,								67,500		67,500	25d
Ebensburg,	Cambria,	Municipal,		1			1		54,000b		54,000b	
Etna,	Allegheny,	Municipal,	1				1		990,000	110,000	1,100,000	275t
Freeport,	Armstrong,	Freeport W. W. Co.,	1				1		420,000	180,000	600,000	300t
Greenwald,	Westmoreland, Salem Twp.,	Donohoe W. Co.,			1			1	23,000a	85,000a	108,000a	
Heilwood,	Indiana, Pine Twp.,	Pine Township W. Co., Possom Glory W. Co.			1		1		174,500	500	175,000	76t
Hooversville,	Somerset,	Hooversville W. Co.,	1			1			30,000b	75,000a	105,000b	
Indiana,	Indiana,	Clymer W. Co. of Indiana,	1				1		100,000	300,000	400,000	80t
Johnstown,	Cambria,											
Dale,	Cambria,											
Daisytown,	Cambria,	Johnstown W. Co.,	1			1					9,830,000	148t
Ferndale,	Cambria,											
Rosedale,	Cambria,											
Westmont,	Cambria,											
Johnstown,	Cambria,	Morrellville & Cambria Borough W. Co.			1			1	225,000a	25,000a	250,000a	
		The Walnut Grove W. Co.,		1		1			25,000a		25,000a	
		Private, Moses Weaver,		1		1			3,500a		3,500a	
Josephine,	Indiana, Blacklick Twp.,	Josephine W. Co.,		1			1		33,000		33,000	33d
Latrobe,	Westmoreland,											
Bradenville,	Westmoreland, Derry Twp.,											
Dorothy,	Westmoreland, Derry Twp.,											
Loyalhanna,	Westmoreland, Derry Twp.,	Latrobe W. Co. (National W. Wks. & Guarantee Co.	1				1		1,000,000	1,500,000	2,500,000	252t
McChesneytown,	Westmoreland, Derry Twp.,											
Snydertown,	Westmoreland, Derry Twp.,											
West Latrobe,	Westmoreland, Derry Twp.,											
Ligonier,	Westmoreland,	Municipal,	1			1			40,000a	40,000a	80,000a	
Lilly,	Cambria,	Summit W. S. Co. (Pennsylvania R. R. Co.	1			1			125,000a		125,000a	
Millerstown,	Butler,	Private, H. A. Leopold,		1			1		27,000a	34,000a	61,000a	
Millvale,	Allegheny,	Municipal,	1				1		1,080,000	120,000	1,200,000	133t
Natrona,	Allegheny, Harrison Twp.,	Natrona W. Co.,			1			1	210,000b		210,000b	
Birdville,	Allegheny, Harrison Twp.,											
Nanty-Glo,	Black Lick & Jackson Twps.,	Cambria W. S. Co.,	1			1				12,000a	12,000a	
		Private, M. & E. C. Davis,	1			1			14,000b		14,000b	
New Florence,	Westmoreland,	Municipal,	1			1			38,800a	1,200a	40,000a	
New Kensington,	Westmoreland,											
Arnold,	Westmoreland,	Kensington W. Co.,	1				1		1,601,000	687,000	2,288,000	167t
Parnassus,	Westmoreland,											

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 18—Continued

Place	County	Company	Supply: Source: Surface	Supply: Source: Ground	Supply: Source: Combined	Supply: Method: Gravity	Supply: Method: Pumped	Supply: Method: Combined	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Oakmont,	Allegheny,	Suburban W. Co. of Allegheny,	1	---	---	---	1	---	685,000	790,000	1,475,000	184t
North Bessemer,	Allegheny, Penn Twp.,											
Verona,	Allegheny,											
Unity,	Allegheny, Plum Twp.,											
Pittsburgh,	Allegheny,	Municipal,	1	---	---	---	1	---	----------	----------	6,052,000	242t
Portage,	Cambria,	Portage W. Co.,	1	---	---	1	---	---	450,000a	200,000a	650,000a	------
Martindale,	Cambria, Portage Twp.,											
Springhill,	Cambria, Portage Twp.,											
Trout Run,	Cambria, Portage Twp.,											
Rankin,	Allegheny,	Municipal,	1	---	---	---	1	---	170,000	30,000	200,000	27t
Saltsburg,	Indiana,	Municipal,	1	---	---	---	1	---	71,000	4,000	75,000	68t
Sharpsburg,	Allegheny,	Municipal,	1	---	---	---	1	---	840,000	360,000	1,200,000	120t
Sonman,	Cambria, Portage Twp.,	Bens Creek W. Co.,	1	---	---	1	---	---	73,000a	197,000a	270,000a	------
Bens Creek,	Cambria, Portage Twp.,											
Shoemaker,	Cambria, Portage Twp.,											
South Fork,	Cambria,	South Fork W. Co.,	---	---	1	---	---	1	1,900,000	100,000	2,000,000	286t
Springdale,	Allegheny,	Municipal,	---	---	1	---	1	---	22,000	----------	22,000	22d
Starford,	Indiana, Green Twp.,	Private, S. B. Glassford,	---	1	---	1	---	---	150a	----------	150 a	------
Stoyestown,	Somerset,	Stoyestown W. Co.,	---	1	---	---	1	---	10,000a	----------	10,000a	------
Summerhill,	Cambria,	Cambria County W. S. Co.,	1	---	---	1	---	---	42,000b	----------	42,000b	------
Ehrenfeld,	Cambria, Croyle Twp.,											
Tarentum,	Allegheny,	Allegheny Valley W. Co.,	1	---	---	---	1	---	1,250,000	250,000	1,500,000	94t
Brackenridge,	Allegheny,											
Creighton,	Allegheny, East Deer Twp.,											
Glassmere,	Allegheny, East Deer Twp.,											
Hites,	Allegheny, East Deer Twp.,											
Twin Rocks,	Cambria, Black Lick Twp.,	Marie W. Co.,	---	---	1	---	---	1	15,000a	2,000a	17,000a	------
Vandergrift,	Westmoreland,	Vandergrift W. Co.,	---	1	---	---	1	---	444,500	11,000	455,500	40t
E. Vandergrift,	Westmoreland,											
N. Vandergrift,	Westmoreland, Parks Twp.,											
Park Plan,	Westmoreland, Allegheny Twp.,											
Vandergrift Hts.,	Westmoreland,											

Vintondale,	Cambria,	Black Lick W. Co. and Jackson W. Co.	1	---	---	---	---	1	225,000a	1,275,000a	1,500,000a	------
Wehrum,	Indiana, Buffington Twp.,	Buffington W. Co., East Wheatfield W. Co.	1	---	---	---	1	---	23,000	98,600	121,600	203t
Wilkinsburg,	Allegheny,	Pennsylvania W. Co.,	1	---	---	---	1	---	3,000,000	5,394,400	8,394,400	89t
East Pittsburgh,	Allegheny,											
Edgewood,	Allegheny,											
North Braddock,	Allegheny,											
Pitcairn,	Allegheny,											
Pittsburgh, 13th Ward,	Allegheny,											
Swissvale,	Allegheny,											
Turtle Creek,	Allegheny,											
Wilmerding,	Allegheny,											
Townships in district,	Allegheny,											
Windber,	Somerset,	Windber Water & Power Co.,	1	---	---	---	---	1	210,000b	2,790,000b	3,000,000a	------
Berwindo,	Somerset, Paint Twp.,											
Paint,	Somerset,											
Scalp Level,	Cambria,											
Seanor,	Somerset, Paint Twp.,											

aEstimated by water companies.
bEstimated by Water Supply Commission.
dDomestic.
tTotal.
*Summit Water Supply Co.

RAILROAD WATER SUPPLIES, SECTION NO. 18

PENNSYLVANIA

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Pittsburgh Div'n				
Bens Creek Branch,	Summit W. S. Co.,		20,000	
Blairsville Int.,	High Ridge W. S. Co.,			
Conemaugh,	Conemaugh River,	Pumped,	1,000,000	
	Summit W. S. Co.,			
Derry,	High Ridge W. S. Co.,		311,000	
Greenwald,	Donohoe Coal & Coke Co.,		12,000	
Hillside,	High Ridge W. S. Co.,		43,000	
Jamison No. 2,	Donohoe Coal & Coke Co.,		90,000	
Latrobe Unity Br. Junction,	Latrobe W. Co.,			64,000
Lovett,	Summit W. S. Co.,		75,000	
New Florence,	High Ridge W. S. Co.,		434,000	
	Conemaugh River,	Pumped, (emergency)		
Old Portage,	Summit W. S. Co.,		25,000	
Paint Creek Jct.,	Richland Twp. W. Co.,			62,000
Portage, Wilmore (4 track pans)	Summit W. S. Co.,		2,304,000	
Lilly,	Summit W. S. Co.,		20,000	
Sang Hollow (3 track pans),	Conemaugh River,	Gravity & pumped	550,000	
Saxmans (4 track pans),	Latrobe W. Co.,			
	High Ridge W. S. Co.,		1,236,000	
South Fork,	Summit W. S. Co.,		476,000	
Wild Cat—Sang Hollow Ext.	Springs,	Gravity,	50,000	
Windber,	Paint Creek Twp. W. Co.,			85,000
Conemaugh Div'n				
Apollo,	Apollo W. Co.,			3,400
Avonmore,	Kiskiminitas River,	Pumped,	170,000	
	Well,	Pumped,		
Blairsville,	High Ridge W. S. Co.,		190,000	
	Blairsville W. Co.,			
Braeburn,	Allegheny River,	Pumped,	100,000	
Butler Jct.,	Threefort W. Co.,			184,000
Coleman,	Allegheny River,	Pumped,	200,000	
Etna,	Allegheny River,	Pumped,	210,000	
Graceton,	Graceton Coke Co.,		6,600	
Harr's Island Stock Yard,	Pitts. Provision & Packing Co.			2,500
"HI" Tower,	Allegheny River,	Pumped,	80,000	
Indiana,	Clymer W. Co.,			3,000
Kiskiminitas Jct.,	Kiskiminitas River,	Pumped,	150,000	
Madison Ave.,	Pittsburgh Municipal,			4,800
Marwood,	Spring,	Gravity,	8,000	
Natrona,	Penna. Salt Mfg. Co.,		12,000	
New Kensington,	N. Kensington W. Co.,			30,000
"ON" Yard Office, "CQ" Engine House,	Pittsburgh Municipal,			323,000
Pittsburgh, 20th St.,	Pittsburgh Municipal,			
	Well,	Pumped,		100,000
Pittsburgh, 47th & 48th Sts.,	Allegheny River,	Pumped,		220,000
	Pittsburgh Municipal,			
Springdale,	Allegheny River,	Pumped,		60,000
Tunnelton,	Conemaugh River,	Pumped,	120,000	
	Spring,	Pumped,		
Vandergrift,	Kiskiminitas River,	Pumped,		
	Well,	Pumped,		
Verona,	Suburban W. Co.,			227,000
Cresson Div'n				
Beulah Road,	Stream,	Pumped,	59,000	
	Run,	Gravity,		
Josephine,	Black Lick Creek,	Pumped,	17,000	
Stiles Run,	Stiles Run,	Gravity,	21,000	
Vintondale,	Shuman Run,	Gravity,	44,000	
Winfield R. R.				
Butler Jct.,	Freeport W. Co.,			8,000
West Winfield,	Winfield Sand & Mineral Co.			8,000

RAILROAD WATER SUPPLIES, SECTION NO. 18—Continued

BALTIMORE & OHIO

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Allegheny,	Pittsburgh Municipal,			205,000
Bakerstown,	Spring,	Gravity,	4,000	
Chicora,	Private system,			21,000
Boswell,	Somerset Smokeless Coal Co.			30,000
Jerome Jct.,	Mfg's W. Co.,			100,000
Johnstown,	Johnstown W. Co.,			125,000
Kauffman Run,	Kauffman Run,	Gravity,	50,000	
Millvale,	Allegheny River,	Pumped,	120,000	
Pittsburgh, 33rd & 40th Sts.,	Pittsburgh Municipal,			124,000
Pittsburgh, 10th & Try Sts.,	Pittsburgh Municipal,			65,000
Rowena,	Stream,	Gravity,	75,000	
Wells Creek,	Wells Creek,	Pumped,	150,000	
	Old Mine Shaft,	Gravity,		
Wildwood,	Stream,	Gravity & pumped	150,000	

BUFFALO, ROCHESTER & PITTSBURGH

Fenelton,	Reservoir,	Gravity,	25,000	
Indiana,	Clymer W. Co.,			25,000
"JM" Jct.,	Well,	Pumped,	75,000	
Josephine,	Penna. R. R.,		15,000	
Iselin,	Pittsburgh Gas Coal Co.,			50,000
Lucerne,	R. & P. Coal & Iron Co.,			25,000
Pittsburgh,	Municipal works,			

ETNA & MONTROSE

Pittsburgh,	Carnegie Steel Co.,			30,000

JOHNSTOWN & STONY CREEK

Johnstown,	Johnstown W. Co.,			20,000
	Mfg's W. Co.,			

PITTSBURGH & ALLEGHENY RIVER

Pittsburgh,	Municipal works,			8,000
	Allegheny River,	Pumped,	2,000	

LIGONIER VALLEY RAILROAD

Wilmore,	The Shenango Furnace Co.,			8,000
Totals,			8,699,600	2,220,700

INDUSTRIAL WATER SUPPLIES, SECTION NO. 18 (MISCELLANEOUS COMPANIES)

Does Not Include the Smaller Companies

Place	Company	Source	Method	Consumption (gallons per day) Domestic	Consumption (gallons per day) Industrial	Daily amount of product	Returned to stream (%)	Increase in temp. °F
Pittsburgh City, Allegheny County—	American Bridge Co., Shiffler Plant	Municipal works,			(35,000)	120 tons	all	0
	American Locomotive Co.,	Municipal works,			(580,000)	300 locos. year	75	0
	Brown & Co., Inc. (Wayne iron & steel works)	Allegheny River,	Pumped,		1,700,000		80	20
	Carnegie Steel Co.:							
	Clark works,	Allegheny River,	Pumped,		1,600,000	250 tons	90	10
		Municipal works,			(1,200)		75	0
	Upper Union works,	Allegheny River,	Pumped,		3,000,000	1,000 tons	90	10
		Municipal works,			(4,000)		75	0
	Lower Union works,	Allegheny River,	Pumped,		1,250,000	475 tons	80	20
		Municipal works,			(1,200)		75	20
	Pittsburgh warehouse,	Municipal works,			(10,000)	60 tons	95	0
	Lucy furnaces,	Allegheny River (by wells)	Pumped,		7,000,000	750 tons	98	56
		Drilled well,	Pumped,		30,000 drinking			
	C. L. Flaccus Glass Co.,	Allegheny River,	Gravity,		3,100	50 tons	0	0
		The Allegheny Valley Water Co. (fire service to sprinkler system)						
	Wm. Flaccus Oak Leather Co.,	Municipal works,			(30,000)			
	Harbison-Walker Refractories Co. (Star Works)	Municipal works,			8,000	20 tons	0	0
	Hubbard & Co. (shovels and construction tools)	Allegheny River,	Pumped,		300,000	300 tons	85	15
		Municipal works,			(800)			
	Mackintosh, Hemphill & Co., Fort Pitt foundry	Allegheny River,	Pumped,		s60,000	42 tons	30	slight
	The McConway & Torley Co.,	Allegheny River,	Pumped,		1,000,000	75 tons	90	0
		Municipal works,			(5,000)			
	National Bolt & Nut Co.,	Hubbard & Co.,						
	Pittsburgh Screw & Bolt Co.,	2 drilled wells,			300,000			
	Wadsworth Stone & Paving Co.	Municipal works,			(700)			
	Pittsburgh Valve, Foundry & Construction Co.	Allegheny River, 2 drilled wells,	Pumped,		12,000		40	0
		Municipal works,			(3,000)			

	H. K. Porter Co. (light locomotives)	2 drilled wells,	Pumped,		10,000		100	0
		Municipal works,			(25,000)		80	50
	Spang, Chalfant & Co., Inc.,	Allegheny River,	Pumped,		2,000,000	470 tons tubular goods	100	slight
		Pine Creek,	Pumped,		1,000,000			
	Union Steel Casting Co.,	Allegheny River,	Pumped,		6,000			
		Municipal works,			(60,000)			
Arnold, Westmoreland County,	American Window Glass Co.,	Allegheny River, Well,	Pumped,		s&c200,000		90	0
Brackenridge, Allegheny County,	Allegheny Steel Co.,	Allegheny River,	Pumped,		4,000,000	540 tons	30	25
Creighton, Allegheny County,	Pittsburgh Plate Glass Co.,	Allegheny River,	Pumped,		1,500,000		95	0
Derry, Westmoreland County,	American Window Glass Co.,	3 artesian wells,	Pumped,		480,000		100	0
Etna, Allegheny County,	Carnegie Steel Co., Isabella furnaces	Allegheny River,	Pumped,		12,000,000	1,250 tons	98	36
		Drilled well,	Pumped,		40,000 drinking			
Johnstown, Cambria County,	Cambria Steel Co. (see description under Johnstown)	Peggys Run,	Gravity,		1,450,000			
		Conemaugh River, Little Conemaugh River	Pumped,			2,830 tons steel	95	20
		Manufacturers Water Co.			92,000,000	1,070 tons coke		
		Johnstown Water Co.,			(735,000)			
Josephine, Indiana County,	Josephine Furnace & Coke Co.,	(See description under Josephine, Sec. No. 18)			6,000,000			
Latrobe, Westmoreland County,	Peters Paper Co.,	Loyalhanna Creek,	Pumped,	1,600	1,500,000	80,000 lbs. roof felt	35	0
		Small Run,	Gravity,	(60 pop.)				
New Kensington, Westmoreland County	Union Spring & Mfg. Co.,	Allegheny River,	Pumped,		150,000		10	0
Oakmont, Allegheny County,	Best Mfg. Co.,	2 drilled wells,	Pumped,		60,000	800 tons iron, brass & steel	0	0
		Suburban Water Co. of Verona			(20,000)			
Shoenberger,	American Steel & Wire Co.,	Allegheny River,	Pumped,		14,000,000	1,160 tons	98	48
Swissvale, Allegheny County,	The Union Switch & Signal Co.	Penna. Water Co.,			(100,000)	46 tons	0	0
Tarentum, Allegheny County,	Tarentum Paper Mills,	Allegheny River,	Pumped,		2,800,000	70,000 lbs.	90	10 to 15
		Allegheny Valley Water Co. (emergency)						
	Pittsburgh Plate Glass Co.,	Allegheny River,	Pumped,		2,500,000		98	6
Universal, Allegheny County,	Universal Portland Cement Co.,	Pennsylvania Water Co.			(114,000)	9,000 bbls.	0	0
Verona, Allegheny County,	Verona Steel Castings Co.,	Suburban Water Co. of Verona			(65,000)		0	0
	Bollinger-Andrews Construction Co.	Suburban Water Co. of Verona			(20,000)	112 tons	0	6
Totals from private systems,				1,000	157,959,100			

sWater for steam purposes
cWater for cooling or condensing purposes.

INDUSTRIAL WATER SUPPLIES, SECTION NO. 18 (COAL MINING COMPANIES)

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
Allegheny County							
Creighton,	McFetridge Bros. Coal Co.,	2 drilled wells,	Pumped,		s 3,500	890	1
Glassmere,	The Cornell Coal Co.,	Crawford's Run & drilled well,	Pumped,		s 28,000	1,170	1
		Allegheny Valley W. Co.,	Emergency,				
Harwick,	The Allegheny Coal Co.,	Shoops Run,	Gravity,	2,950 (750 pop.)	s 71,400	2,020	1
		Allegheny River,	Pumped,				
Cambria County							
Argyle,	Argyle Coal Co.,	South Fork W. Co.,			*(490 HP.)	1,210	2
Beaverdale,	Logan Coal Co. (Mines No. 2 & No. 4)			16,800	s 105,600	1,440	2
Dunlo,	Logan Coal Co. (Mines No. 1 & No. 7)			4,650	s 28,000	670	2
Barnesboro,	Empire Coal Mining Co.,				*(460 HP.)	580	1
Colver,	Ebensburg Coal Co.,	Francis Run,	Gravity,		s 20,000	2,090	1
		Drilled well,	Pumped,		s 40,000		
Ebensburg,	Springfield Coal Min. Co.,	Black Lick Creek,	Pumped,	1,000 (100b pop.)	s 57,600	570	1
Llanfair,	Henriette Coal Min. Co.,	Yellow Run,	Gravity,		s 3,600	740	1
		Drilled well,	Pumped,	3,000 (800 pop.)			
Lilly,	W. H. Piper & Co. (Sonman No. 2 Mine)	Bear Rock Run,	Gravity,	1,500b (80 pop.)	s 53,000	850	1
		Beaverdale Dam,	Emergency,				
Nanty Glo,	Lincoln Coal Co.,	Springs & streams,	Grav., 200,000 gal. res., pumped	3,000b	12,000	600	1
		Wells,					
	Springfield Coal Min. Co. (Ivory Hill Mine)				*(140 HP.)	370	1
	Nanty Glo Coal Min. Co.,	Cambria Co. W. S. Co.,			s (28,000)	885	1
Onnalinda,	Loyalhanna C. & C. Co.,	Lick Run,	Gravity,	10,500 (350 pop.)	s 20,000	663	1
			Pumped,				
Portage,	Miller Coal Co.,	Portage Water Co.,			*(800 HP.)	1,110	1
	George Pearce & Sons,	Portage Water Co.,			*(160 HP.)	645	2
	Portage Coal Min. Co.,	Portage Water Co.,			*(1020 HP.)	1,360	2
	Trout Run Coal Min. Co.,	Portage Water Co.,			*(150 HP.)	210	1
Puritan,	Forge Coal Min. Co.,	Portage Water Co.,			s (60,000)	740	2
	Shoemaker Coal Min. Co.,	Portage Water Co.,			*(410 HP.)	230	1
Sonman,	Sonman Shaft Coal Co.,	Bens Creek Water Co.,			s (110,000)	1,150	1

South Fork,	Stineman Coal & Coke Co., No. 2	South Fork Water Co.,			s (6,200)	650	1
	Stineman Coal & Coke Co., No. 4	South Fork Water Co.,			s (25,000)	410	1
	Stineman Coal Min. Co.,	South Fork Water Co.,			s (28,000)	780	1
Twin Rocks,	Big Bend Coal Min. Co.,	Drilled wells,	Pumped,		s 35,000	610	1
Vintondale,	Vinton Colliery Co.,	Jackson Water Co.,			s (30,000)	coal 1,554	3
					w & c(1,270,000)	coke 270	3
Wilmore,	Shoemaker Coal Min. Co.,	Ben's Creek,		2,000b (100 pop.)	s 14,000	1,030	1
Indiana County							
Coral,	Wharton Coal & Coke Co.,	(See Coral Vil., Sec. 18),		1,000	s 30,000	200	1
Edri,	Saltsburg Coal Min. Co., Foster Mines	Springs,	1,000,000 gal. res., gravity		s 40,000	1,720	1
		Kiskiminitas River,	Pumped,				
		Wells,	Pumped,	3,000 (350 pop.)			
	Avonmore Coal & Coke Co., Avonmore Mine	Springs,	1,000,000 gal. res., gravity		s 15,000	650	1
		Kiskiminitas River,	Pumped,				
		Wells,	Pumped,	1,000 (100 pop.)			
Graceton,	Graceton Coke Co.,	(See Graceton Vil., Sec. 18),			s 75,000 c 594,000 *(1845 HP.)	coal 730 coke 250 2,590	2 6
Heilwood,	Penn Mary Coal Co.,						
Idamar,	Dixon Coal Min. Co.,	Spring Run,	Grav., 400,000 gal, res.,		s 10,600	540	1
Wehrum,	Lackawanna Coal & Coke Co.	Drilled well,	Pumped,		w 660,000	1,190	1
		Black Lick Creek,	Pumped,		s (98,600)		
		Buffington W. Co.,		(23,000)			
Somerset County							
Acosta,	The Consolidation Coal Co.,	(See Acosta Vil., Sec. 18),		18,000	s 10,000	1,410	2
Cairnbrook,	Loyalhanna Coal & Coke Co.,	Cairnbrook W. Co.,	(Desc. under Cairnbrook),	(17,500)	(500)	59	1
Hooversville,	Baker-Whiteley Coal Co.,	Dixie Run,	Gravity, 900,000 gal. res.,	12,000 (300 pop.)	s 43,200	680	2
	Somerset Min. Co. (Knickerbocker No. 1)	Hooversville W. Co.,				750	1
	Knickerbocker Smokeless Coal Co.	Hooversville W. Co.,				1,030	2
Jenner,	The Consolidation Coal Co.,	Drilled well,	Pumped to two 50,000 gal. tanks	15,000 (1,500 pop)	s 150,000	2,440	2
Kimmelton,	Reading Iron Co. (Somerset Coal Dept.)	(See Kimmelton Vil., Sec. 18),		5,000 (225 pop.)	s 19,500	495	2
Listie,	The Consolidation Coal Co.,	Run,	Pumped,		s 2,600	260	1
		Spring,	Pumped,				
Stoughton,	The Consolidation Coal Co.,	Drilled well,	Pumped to 25,000 gal. tank	4,000	s 8,000	270	1
Windber,	Berwind-White Coal Min. Co.,	Windber W. & P. Co.,			c(2,400,000) s (390,000)	12,330	12

INDUSTRIAL WATER SUPPLIES, SECTION NO. 18 (COAL MINING COMPANIES)—Continued

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
Westmoreland County							
Baggaley,	H. C. Frick Coke Co.,	Puritan W. Co.,		(19,130)	s (98,560) c (115,860)	coal 1,262 coke 796	1
Bradenville,	Latrobe-Connellsville Coal & Coke Co. (Derry No. 1 Mine)	Latrobe W. Co.,			(254,000)	coal 1,100 coke 480	1
	Bessemer Coke Co. (Duquesne Plant)	Small stream,	Gravity,		s 15,000	425	1
Derry,	Ligonier Coal Co. (No. 2 Mine)	Westmoreland W. Co.,			(46,000)	coal 510 coke 25	1
Dorothy & Monastery,	H. C. Frick Coke Co.,	Latrobe W. Co.,		(11,500)	s (83,344) c (148,200)	coal 957 coke 576	2
Latrobe,	Latrobe-Connellsville C. & C. Co. (Saxman Mine)	Latrobe W. Co.,			(36,000)	460	1
	Latrobe-Connellsville C. & C. Co. (Superior No. 1 Mine)	Latrobe W. Co.,				coal 310 coke 55	1
Greenwald,	Donohoe Coke Co.,	Donohoe W. Co.,		(23,000)	s (35,000) c (40,000)	coal 877 coke 362	1
Hostetter & Whitney,	Hostetter-Connellsville Coke Co.	Armel Hollow Reservoir,	(21,430,000 gals.),	33,625 1,345 pop.)	s 201,720 c 268,660	coal 2,530 coke 1,610	2
Loyalhanna,	Loyalhanna C. & C. Co.,	Latrobe Water Co.,		(2,100)	s (17,400)	coal 777 coke 54	1
Millwood,	Latrobe-Connellsville Coal & Coke Co. (Millwood Mine)	Springs,	Gravity, 3,250,000 gal. res.			270	1
Salem Township,	Keystone Coal & Coke Co. Salem & Huron Mines	Salem reservoir, 269,000,000 gals.	Gravity,	31,000 (1200 pop.)	s 188,000 w 85,000 c 188,000	coal 2,400 coke 850	4
Salina,	Cochran Coal Co.,	Drilled well,	Pumped to 2 10,000 gal. tanks		s 16,000	690	1
Saltsburg,	Roaring Run Min. Co.,				*(300 HP.)	630	1
Seward,	Nineveh Coal & Coke Co.,	High Ridge Res. Run,	Gravity, 100,000 gal. res.,			560	2
Superior,	Latrobe-Connellsville C. & C. Co. (Connellsville & Derry No. 2 Mines)	Westmoreland W. Co.,			(137,000)	coal 970 coke 305	2
Vandergrift,	Pine Run Co., Lewis Mine,	American Sheet & Tin Plate Co.	Kiskiminitas Riv., pumped		*(300 HP.)	650	1
Valley Camp,	The Valley Camp Coal Co.,	Allegheny River,	Pumped,		s 9,760	1,470	1
West Apollo,	Paulton Coal Min. Co., Paulton Mine	Apollo Water Co.,			*(600 HP.)	340	1

Wilken,	The Shenango Furnace Co., "Coke Works"	Mill Creek,	Gravity, 1,000,000 gal. res.	1,000 (250 pop.)	s 15,000 c 15,000	coal 960 coke 170	1
Total from private systems,				170,025	3,151,089		

*Capacity of boilers
sWater for steam purposes
cWater for quenching coke
wWater for washing coal

ACMETONIA (HARMAR TWP.), ALLEGHENY COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 250a

LOCATION

Northeastern Allegheny County, on north bank of Allegheny River, adjacent to Cheswick Borough; on Pennsylvania R. R. and Allegheny Valley Street Ry.

WATER SUPPLY

Private system built in 1899 by Cris. Mardorf.

Source of supply spring of constant flow on hillside west of village; water collected in 5,000 gallon reservoir. Water soft.

Water delivered by gravity through 2-inch pipe; pressure 30 pounds. Average daily consumption 1,250 gallons to 25 families, all domestic.

ACOSTA (JENNER TWP.), SOMERSET COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 1,000a

LOCATION

Northwestern Somerset County, in valley of south branch Quemahoning Creek, tributary of Stony Creek, 10 miles north of Somerset; on Boswell Branch of Baltimore & Ohio R. R. Built-up section on level land east of creek; range of elevation 1,850 to 1,915.

INDUSTRIES

Mines Nos. 120 and 121 of Consolidation Coal Co.

WATER SUPPLY

Private system of Consolidation Coal Co., built in 1908.

SOURCE AND COLLECTION

(1) A 10-inch drilled well, 189 feet deep, through coal veins to sandstone formation at base of steep hill 600 feet from west bank of Quemahoning Creek. Water pumped by 58,000 gallon Downie deep

well pump to 5,000 gallon settling tank; flows through 1,200 gallon mechanical filter unit to 5,000 gallon clear water well; raised by a Yough duplex steam pump through 4-inch force main, 500 feet into two 50,000 gallon storage tanks on hilltop, at elevation 2,034.

(2) Spring on hillside 700 feet east of tipple; elevation 1,890.

DISTRIBUTION

From (1) by gravity through 4-inch line 1,200 feet long; pressure 65 pounds; 1.5 miles 2-inch distributing mains; 18 fire hydrants.

From (2) by gravity through 1-inch line 600 feet, long supplying two houses, at elevation 1,870.

CONSUMPTION

Supply to 1,000 people; 15 taps, and 35 hydrants. Average daily consumption 30,000 gallons, 12,000 domestic and 18,000 industrial, measured by pump displacement.

ALLEGHENY COUNTY WORKHOUSE (O'HARA TWP.), ALLEGHENY COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 1,000a

LOCATION

Northeastern Allegheny County, along north bank of Allegheny River about 2 miles east of Aspinwall Borough; on Pennsylvania R. R. at Warner Station; on Allegheny Valley Street Ry.

WATER SUPPLY

Private system installed in 1865.

SOURCE AND COLLECTION

(1) For drinking purposes, from spring north of institution. Water medium hard.

(2) For other purposes, Allegheny River water pumped to 700,000 gallon reservoir south of institution; 8-inch force main 4,500 feet long. Pumping equipment 500,000 gallon Wilson-Snyder duplex pump, a 500,000 gallon Gordon pump and two tubular boilers.

DISTRIBUTION

From (1) by gravity through 3-inch pipe.

From (2) by gravity through 12-inch pipe.

Pressures 35 to 40 pounds; 4,200 feet of 6-inch and 12-inch distributing mains; 10 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,000 people. Stated daily consumption 410,000 gallons, 10,000 for drinking purposes. No means of measurement.

ALLISON PARK (HAMPTON TWP.), ALLEGHENY COUNTY

ALLISON PARK WATER COMPANY

Estimated 1915 population, 500a

LOCATION

Northern Allegheny County, along Pine Creek; on Baltimore & Ohio R. R. Built-up portion in valley. Agricultural district.

WATER SUPPLY

Allison Park Water Co., incorporated 1911 for Hampton Township.

SOURCE AND COLLECTION

An 8-inch drilled well, 260 feet deep, on hillside north of village; 32,000 gallon pump operated by gasoline engine forces water to 8,000 gallon reservoir nearby.

DISTRIBUTION

By gravity through 3-inch pipe; pressure 40 pounds.

CONSUMPTION

Supply to 75 people; 20 taps. Stated consumption 300 gallons daily, all domestic. No means of measurement.

APOLLO AND LEECHBURG BOROUGHS, ARMSTRONG COUNTY; WEST APOLLO AND PAULTON VILLAGES (WASHINGTON TWP.), WESTMORELAND COUNTY

APOLLO WATER WORKS COMPANY
LEECHBURG WATER WORKS COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Apollo,	3,006	82	3,400a
Leechburg,	3,624	1,165	3,600a
W. Apollo,			250
Paulton,			250
Total,			7,500

LOCATION

Boroughs in southern Armstrong County, along north bank of Kiskiminitas River, 6 miles apart; connected by Pittsburgh & Allegheny Valley Street Ry. and Pennsylvania R. R. Villages of West Apollo and Paulton west of Apollo in Westmoreland County. Elevations of built-up section of Apollo range from 820 (business district) to 970, Leechburg 795 to 940, Paulton 820 to W. Apollo 1,000.

INDUSTRIES

Apollo, steel mill, woolen mill and two flour mills. Leechburg, plant of American Sheet & Tin Plate Co., shovel works. Large plant of American Sheet & Tin Plate Co. in Vandergrift, and West Leechburg Sheet & Tin Plate Co., both across river.

WATER SUPPLY

Apollo Water Works Co., incorporated 1884 for Apollo Borough, furnishes water to Leechburg Water Works Co., incorporated 1887 for Leechburg Borough; both owned by Pennsylvania Water Co., purchase of stock in 1899. Separate plants built 1888, abandoned for new plant 1901.

SOURCE AND COLLECTION

Beaver Run, tributary of Kiskiminitas River from southwest 0.5 mile south of Apollo; dam 0.5 mile above mouth impounds water in 70,000,000 gallon reservoir; watershed area 35 square miles. Another dam 0.5 mile above, on small stream emptying into west end of first reservoir, impounding 10,000,000 gallons; watershed area less than

0.5 square mile; spillway elevation 1,023. Eight-inch gravity main connecting to 16-inch main from first reservoir to two 124,000 gallon settling basins used only during periods of excessive turbidity. Water flows through two 500,000 gallon slow sand filter units to 200,000 gallon clear water well, elevation 815, 1,000 feet from dam; 10-inch suction pipe to pumping station, which contains 1,000,000 gallon Deane triplex pump driven by 85 hp., Alberger gas engine, and 1,500,000 gallon Smith-Vaile triplex pump driven by 125 hp., Westinghouse gas engine; elevation of pumps about 812. Water medium hard.

DISTRIBUTION

By pumping through 12-inch force main 2,500 feet to point in Washington Township, where 12-inch extends to Kiskiminitas River, dividing into two 10-inch mains under river and again uniting to form 12-inch main at east side of Apollo; 12-inch main continues north 5,000 feet, increasing to 16-inch for 500 feet to Owens reservoir in Allegheny Township, Westmoreland County. Capacity of equalizing reservoir 15,000,000 gallons, formed in hill about 1 mile west of Apollo, at elevation 1,145.

From junction of 12-inch and 16-inch mains near reservoir, 16-inch main extends north 2,600 feet, thence 23,000 feet, where it divides into two 10-inch lines under Kiskiminitas River to Leechburg; property of Leechburg Water Works Co.

In Apollo, pressures 40 to 110 pounds; about 6 miles distributing mains; 43 fire hydrants, owned by borough.

In Leechburg, pressures 40 to 110 pounds; about 6.1 miles distributing mains; 44 fire hydrants, owned by borough.

Pressures in business districts reduced to 110 pounds by regulating valves.

CONSUMPTION

	Apollo	Leechburg	Total
Population supplied,	3,400	3,600	7,000
Number of taps,	610	644	1,254

Average daily consumption 424,000 gallons. All taps metered; consumption measured by pump displacement. Small supply to West Apollo and Paulton villages.

ASPINWALL BOROUGH, ALLEGHENY COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 2,592; increase since 1900, 1,361. Estimated 1915, 3,000a

LOCATION

Eastern central Allegheny County, along north bank of Allegheny River; on Conemaugh Division of Pennsylvania R. R.; junction of Allegheny Valley Street Rys. with Pittsburgh Rys. Residential suburb of Pittsburgh.

WATER SUPPLY

Municipal plant purchased from land company which developed borough; works built 1892 and rebuilt 1905. Private supply in outskirts of borough in O'Hara Township, installed 1906.

SOURCE AND COLLECTION

A 12-inch drilled well, 78 feet deep, near river; water lifted to 38,000 gallon wooden tank at pumping station; pumped through 8-inch force main to two wooden tanks, combined capacity 100,000 gallons, on top of hill and 222 feet above pumping station. Pumping equipment one 288,000 gallon Epping-Carpenter duplex pump, one 432,000 gallon Snow duplex pump, one 720,000 gallon Worthington duplex pump, one 125 hp. Geary and one 200 hp. Erie water tube boiler. Booster pumping station at upper tanks lifts water to 35,000 gallon wooden tank 183 feet above. Booster pumps electrically operated, Deane triplex, capacity 140,000 gallons each. About 1 mile of 8-inch force main.

DISTRIBUTION

By gravity through 8-inch main; pressures 93 to 96 pounds; 5.9 miles distributing mains, over one-half 4-inch; 41 fire hydrants, 4-inch and 6-inch.

CONSUMPTION

Supply to 3,000 people; 617 taps. Average daily consumption 156,400 gallons, 70% domestic, 20% industrial and 10% for flushing sewers; measured by meter. All taps are metered, seven industrial.

PRIVATE SUPPLY

To residential district being developed by Delfield Land Co., on outskirts of borough.

Water from spring collected into 50,000 gallon tank. Flow falls short during extreme droughts, like that of 1908. Supplied to 11 houses by gravity through 2-inch pipe; 100 pounds pressure.

COST AND REVENUE

Total cost of works, $38,000; annual operating expenses, $4,000; gross revenue, $9,300.

AVONMORE BOROUGH, WESTMORELAND COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,262; increase since 1900, 632. Estimated 1915, 1,300b

LOCATION

Northern Westmoreland County, in bend of Allegheny River; on Pennsylvania R. R.

INDUSTRIES

In bituminous coal mining district; two steel and foundry companies, tin plate works, bottle works and sauer-kraut factory.

WATER SUPPLY

Municipal works installed in 1909.

SOURCE AND COLLECTION

Four drilled wells on flat land, east side of Fifth Street beyond built-up portion; combined average yield reported as 500,000 gallons daily.

Well	Depth	Location	Connection
No. 1	147 ft.	10 ft. from pump station,	3- inch pipe to 5-inch main
No. 2	247 ft.	250 ft. south of No. 1,	2½-inch pipe to 6-inch main
No. 3	147 ft.	250 ft. east of No. 1,	2½-inch pipe to 6-inch main
No. 4	147 ft.	250 ft. west of No. 2,	2½-inch pipe to 6-inch main

A 10 hp. Hall air pump, belt-connected to 55 hp. Bessemer gas engine, has 2-inch air line pumping from wells to 6-inch main 250 feet to 5,000 gallon clear water tank in pumping station. A 389,000 gal-

lon Aldrich triplex pump direct connected to same gas engine has 8-inch suction and 9-inch force main 50 feet to 8-inch main of distributing system.

DISTRIBUTION

By pumping direct to system with 8-inch connection to 270,000 gallon equalizing reservoir on top of hill 1,500 feet south of pumping station and 250 feet above business section. Average pressure 100 pounds; 3 miles distributing mains 2-inch to 8-inch, 81% 4-inch.

CONSUMPTION

Supply to 550 people; 110 taps, all metered. Average daily consumption 56,000 gallons; 6,000 gallons used by sauer-kraut factory. Measured by pump displacement.

BAGGALEY (UNITY TWP.), WESTMORELAND COUNTY

PURITAN WATER COMPANY
(H. C. Frick Coke Co.)

Estimated 1915 population, 765a

LOCATION

Eastern central Westmoreland County, along Nine Mile Run; on Pennsylvania R. R., West Penn Rys. and Latrobe Street Ry.

INDUSTRIES

H. C. Frick Coke Co., 400 coke ovens.

WATER SUPPLY

Puritan Water Co., incorporated 1896 for Westmoreland County; leased by H. C. Frick Coke Co.; works built in 1897.

SOURCE AND COLLECTION

Wolf Spring Run, tributary of Nine Mile Run, northeast of village; 7,000,000 gallon storage reservoir 1 mile east of village; 6-inch gravity main to two distributing tanks, one 45,000 capacity and other 30,000 gallons; surplus water flows into 200,000 gallon storage reservoir. Two drilled wells used in extreme dry seasons.

DISTRIBUTION

By gravity from tanks to street hydrants; 200,000 gallon reservoir supplies coke ovens by gravity.

CONSUMPTION

Supply to 765 people through street hydrants. Stated average daily consumption 233,600 gallons, 19,100 is domestic and 214,000 industrial. No means of measurement.

BEAVERDALE (ADAMS TWP.), CAMBRIA COUNTY

SUMMIT WATER SUPPLY COMPANY
(Pennsylvania Railroad)

Estimated 1915 population, 1,000b

LOCATION

Southeastern Cambria County, on South Fork Little Conemaugh River, at mouth of Beaverdam Run; on Pennsylvania R. R. Industry, mining.

WATER SUPPLY

Summit Water Supply Co., controlled by Pennsylvania R. R., operates in this district under charter of Beaverdale Water Co., a merger in 1904 of Beaverdale Water Co., incorporated 1900 for Summerhill Township, and Beaverdale Water Co., incorporated 1902 for Adams Township. (For complete description of Summit Water Supply Company, see "Pennsylvania Railroad," this section).

Source of supply, Beaverdam Run; intake 1 mile east of village; 8-inch gravity main to village. Supply to 800 people; average daily consumption 70,000 gallons. No means of measurement.

BENSON BOROUGH, SOMERSET COUNTY

TWO PRIVATE SUPPLIES

Population 1910 census, 387; increase since 1900, 138. Estimated 1915, 500a

LOCATION

Northern central Somerset County, on east bank Stony Creek; 13 miles south of Johnstown; on Cambria Branch of Baltimore & Ohio R. R. Built-up section on lowlands along creek; post office and railroad station known as Holsopple.

INDUSTRIES

Agriculture; three coal mines.

WATER SUPPLY

Two private systems: William A. Snably, installed 1911, and S. P. Berkebile, installed 1913.

SYSTEM OF WILLIAM A. SNABLY

SOURCE AND COLLECTION

(1) Two springs just outside eastern boundary line of borough on hillside, in Paint Township; water collected in 5,000 gallon reservoir nearby. Two other springs near reservoir available, but not used at present.

(2) Eight springs on hillside west of borough, in Conemaugh Township; water led through tile pipe to 60,000 gallon reservoir. All water soft.

DISTRIBUTION

From (1) by gravity through 2-inch line, 1,300 feet long.

From (2) by gravity through 2-inch line, about 1 mile of 1-inch distributing main. Water for fire protection furnished by 6-inch main 2 miles north of borough from Quemahoning Creek to plant of Cambria Steel Co. at Johnstown.

CONSUMPTION

Supply to 215 people; 60 taps, 15 in Conemaugh Township. Stated average daily consumption, 3,000 gallons, all domestic. No means of measurement.

SYSTEM OF S. P. BERKEBILE

SOURCE AND COLLECTION

Spring on hillside west of borough, in Conemaugh Township, 500 feet from and 50 feet above creek; water led through 4-inch terra cotta pipe, reducing to 2-inch, 100 feet to 2,625 gallon reservoir 20 feet above houses. Water very hard.

DISTRIBUTION

By gravity through $\frac{3}{4}$-inch line to two houses nearby, and $1\frac{1}{4}$-inch line southeast 1,170 feet to four yard hydrants.

CONSUMPTION

Supply to 2 houses and 4 yard hydrants for 30 houses of employees of Pennsylvania Smokeless Coal Co. Stated daily consumption 1,800 gallons, all domestic. No means of measurement.

BLAIRSVILLE BOROUGH, INDIANA COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 3,572; increase since 1900, 186. Estimated 1915, 3,600b

LOCATION

Southern Indiana County, in bend of Conemaugh River; on Pennsylvania R. R. and Indiana County Street Rys. Occupies elevated plateau above river.

INDUSTRIES

Shops, yards and division offices of Pennsylvania R. R.; six coal operations north of borough; Columbia Plate Glass Co., foundries, planing mills, bottling mills, lamp factory and enameled ware factory.

WATER SUPPLY

Municipal plant built in 1872.

SOURCE AND COLLECTION

Twelve 10-inch drilled wells, averaging 275 feet deep, scattered over an area of 6.5 acres on north bank of Conemaugh River in vicinity

of Morewood Avenue; four near river bank and others 150 to 300 feet distant.

Water raised by air-lift into 6-inch terra cotta collecting pipes from each well to 18-inch collecting main to pump well, 30 feet diameter and 11 feet deep. Pumping equipment one air compressor, two 1,000,000 gallon Wilson-Snyder pumps, one 750,000 gallon Youghiogheny pump, one 500,000 gallon Worthington duplex pump, two 150 hp. and one 125 hp. tubular boilers. Water forced through 10-inch main 2,000 feet to junction with 8-inch of distributing system at Walnut Street.

Auxiliary supply in dry seasons from covered sump adjoining pump well; connected to river by 20-inch terra-cotta pipe.

DISTRIBUTION

By pumping direct to system, with connection to 200,000 gallon equalizing reservoir on hilltop just east of borough line.

CONSUMPTION

Supply to 3,600 people; 800 taps. Average daily consumption 1,000,000 gallons daily; measured by pump displacement. Supplies plate glass works.

BOLIVAR BOROUGH AND WEST BOLIVAR VILLAGE (FAIRFIELD TWP.), WESTMORELAND COUNTY; GARFIELD VILLAGE (WEST WHEATFIELD TWP.), INDIANA COUNTY

MACE SPRINGS WATER COMPANY OF BOLIVAR, PA.

	Population 1910 census	Increase since 1900	Estimated 1915
Bolivar,	518	32	550b
West Bolivar and Garfield,			200b

LOCATION

Bolivar and West Bolivar in northeastern Westmoreland County, along south bank of Conemaugh River; Garfield directly across river, in Indiana County; on Pennsylvania R. R.

INDUSTRIES

Reese-Hammond Fire Brick Co., Bolivar Fire Brick Co. and Garfield Fire Clay Co.

WATER SUPPLY

Mace Springs Water Co., of Bolivar, Pa., incorporated 1900 for Bolivar Borough; leased West Bolivar Water Co., incorporated 1900 for Fairfield Township, Westmoreland County, and Garfield Water Co., incorporated 1900 for West Wheatfield Township, Indiana County.

SOURCE AND COLLECTION

Two small tributaries of Tub Mill Creek, south of borough; streams about 1 mile apart, flowing from Chestnut Ridge; storage reservoir, capacity 1,000,000 gallons, about 1 mile southeast of borough. Storage reservoir, capacity 2,500,000 gallons on upper tributary about 2 miles southwest of borough.

DISTRIBUTION

By gravity through 10-inch main, reducing to 8-inch.

CONSUMPTION

Supply to borough and two neighboring villages. Average daily consumption 50,000 gallons. No means of measurement.

BOSWELL BOROUGH, SOMERSET COUNTY

JENNER WATER COMPANY

Population 1910 census 1,878; incorporated 1904. Estimated population 1915, 1,900b

LOCATION

Northwestern Somerset County, on north branch Quemahoning Creek, tributary of Stony Creek; on Baltimore & Ohio R. R.

INDUSTRIES

Operations of Merchant Coal Co.

WATER SUPPLY

Jenner Water Co., incorporated 1901 for Jenner Township, subsidiary of Merchants Coal Co.

SOURCE AND COLLECTION

Three drilled wells, 180, 202 and 240 feet deep, on high point in northeastern part of borough; water pumped by 108,000 gallon electric pump at each well to 10,000 gallon and 43,000 gallon wooden tank over wells; one Gould and two Downie pumps.

DISTRIBUTION

By gravity through 4-inch main.

CONSUMPTION

Supply to about 1,500 people; 190 coal company taps and 82 private taps. Average daily consumption about 120,000 gallons, all domestic; measured by pump displacement. Industrial supply, for boiler purposes at mine, pumped from Quemahoning Creek.

CAIRNBROOK (SHADE TWP.), SOMERSET COUNTY

CAIRNBROOK WATER COMPANY
(Loyalhanna Coal & Coke Co.)

Estimated 1915 population, 350a

LOCATION

Northeastern Somerset County, on Dark Shade Creek, opposite mouth of Beaver River; on small branch of Pennsylvania R. R.

INDUSTRIES

A colliery of Loyalhanna Coal & Coke Co., now under development; population of 2,500 expected when operation begins.

WATER SUPPLY

Cairnbrook Water Co., incorporated 1913 for Shade Township. Temporary source used till construction of permanent works is finished.

TEMPORARY SUPPLY

Drilled well; water pumped to 20,000 gallon standpipe; delivered by gravity to 350 people. Average daily consumption 18,000 gallons, 500 gallons industrial; measured by pump displacement.

SOURCE AND COLLECTION (under construction)

Beaver Run; a 500,000 gallon intake about 3.25 miles east of village and 145 to 200 feet above village; watershed area about 7 square miles. Reservoir will ultimately be increased in capacity to 30,000,000 gallons.

DISTRIBUTION

By gravity through 10-inch main 16,000 feet long, with connection to 20,000 gallon standpipe of temporary supply on hill above village. Temporary supply to be held in reserve for fire purposes until storage of reservoir is increased.

CASSANDRA BOROUGH, CAMBRIA COUNTY

PRIVATE SUPPLY

Population 1910 census, 306; Incorporated 1908. Estimated 1915, 350b

LOCATION

Southeastern Cambria County, along Little Conemaugh River, above mouth of Bens Creek; on Pennsylvania R. R.

WATER SUPPLY

Cassandra Water Co., an unincorporated company formed by several residents; works built in 1898. Source of supply a spring on north side of Pennsylvania R. R. cut, south of village; flow reduced to 125 gallons per day during dry seasons. Supplies small part of borough through gravity main.

CHESWICK BOROUGH, ALLEGHENY COUNTY

CHESWICK WATER COMPANY

Population 1910 census, 317; incorporated 1902. Estimated 1915 population, 300a

LOCATION

Northeastern Allegheny County, along north bank of Allegheny River, adjoining Springdale borough; on Pennsylvania R. R. and Allegheny Valley Street Rys.

WATER SUPPLY

Cheswick Water Co., incorporated 1900 for township of Springdale.

SOURCE AND COLLECTION

Two drilled wells, 42 and 50 feet deep, on hilltop in northern part of borough; water pumped into 2,500 gallon and 12,000 gallon tanks. Pumping equipment 6 hp. gas engine pump and 10 hp. hot air engine pump. Water soft.

DISTRIBUTION

By gravity through 4-inch main.

CONSUMPTION

Supply to 300 people through 53 taps, 30 metered. Average daily consumption 5,000 gallons, all domestic, estimated by pump displacement.

CLYMER BOROUGH, INDIANA COUNTY

PRIVATE SUPPLY

Population 1910 census, 1,753; incorporated 1908. Estimated 1915, 3,000a

LOCATION

Eastern central Indiana County, along Two Lick Creek at mouth of Dixon Run; on Cherry Tree & Dixonville R. R. and Indiana County Street Rys.

INDUSTRIES

Operations of Russell Coal Co. and Clearfield Bituminous Coal Co.; brick works.

WATER SUPPLY

Private system owned by several residents, installed in 1909.

SOURCE AND COLLECTION

Spring on hillside, south of borough; reported minimum flow 30,000 gallons daily. Water collected in small basin with 3-inch tile line to concrete reservoir, capacity 260,000 gallons, elevation 200 feet above borough and 100 feet below spring. Water soft.

DISTRIBUTION

By gravity through 6-inch main, 750 feet, reducing to 4-inch for 450 feet to borough; pressures 80 to 110 pounds; 0.8 mile 2-inch and 3-inch laterals; 9 fire hydrants, 2½-inch.

CONSUMPTION

Supply to 700 people; 109 taps, 75 metered. Average daily consumption 4,500 gallons, all domestic. Houses of coal companies supplied by private drilled wells; water reported impregnated with sulphur.

COLFAX (SPRINGDALE TWP.), ALLEGHENY COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 300a

LOCATION

Northeastern Allegheny County, along north bank of Allegheny River, at eastern edge of Springdale Borough; on Conemaugh Division of Pennsylvania R. R. and Allegheny Valley Street Ry.

INDUSTRIES

Nursery and greenhouses.

WATER SUPPLY

Private system of B. L. Elliott, of Elliott Nursery Co.

SOURCE AND COLLECTION

Spring in ravine on hillside west of village; piped to 12,000 gallon brick tank nearby. Water soft.

DISTRIBUTION

By gravity through 3-inch pipe, 100 feet long; pressures 40 to 60 pounds; 0.8 mile distributing pipe; 3 fire hydrants.

CONSUMPTION

Supply to 200 people through 44 taps to houses belonging to Heidenkamp Plate Glass and Mirror Co. of Springdale and to nursery company. Average daily consumption 7,000 gallons, 30% domestic, metered, and 70% industrial, estimated.

COLVER (CAMBRIA TWP.), CAMBRIA COUNTY

COLVER WATER COMPANY

Estimated 1915 population, 3,000a

LOCATION

Northeastern Cambria County, on ridge at headwaters of North and South Forks of Black Lick Creek; on Southern Cambria Ry.

INDUSTRIES

Operations and power house of Colver Coal Co.

WATER SUPPLY

Colver Water Co., incorporated 1913 for Cambria Township.

SOURCE AND COLLECTION

Vetera branch of North Branch of Black Lick Creek; 4,000,000 gallon reservoir at Vetera, 2 miles north of village; site of abandoned grist mill. Pumps, electrically operated, capacity of 360,000 gallons daily, force water through 8-inch main 11,300 feet to distributing reservoir No. 1, in village, capacity 1,000,000 gallons, and to distributing reservoir No. 2, at Vetera, capacity 40,000,000 gallons.

DISTRIBUTION

By gravity through 6-inch main; 3.9 miles distributing mains, 2-inch to 8-inch, 45% 4-inch; 26 fire hydrants, 4-inch.

CONSUMPTION

Supply to 2,500 people; 300 taps. Stated consumption 50,000 gallons daily, all domestic. No means of measurement.

CORAL (CENTRE TWP.), INDIANA COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 500b

LOCATION

Southern Indiana County, along Two Lick Creek; on Pennsylvania R. R. and Indiana County Street Rys.

INDUSTRIES

Operations of Wharton Coal & Coke Co., 300 coke ovens.

WATER SUPPLY

Private system of Wharton Coal & Coke Co.

SOURCE AND COLLECTION

Two small streams flowing from Chestnut Ridge, east of village; 3,000,000 gallon and 4,000,000 gallon storage reservoirs; one on each stream; 20,000,000 gallon reservoir below junction of two; water from large reservoir pumped to one of smaller reservoirs.

Five drilled wells, about 70 feet deep, in village, and four drilled wells, 225 to 400 feet deep, used for auxiliary supply in dry seasons; water raised by air lift and pumped to reservoirs. Auxiliary supply from Two Lick Creek. About 720,000 gallons daily pumped from mines but not utilized.

DISTRIBUTION

By gravity from upper reservoir through 4-inch and 6-inch lines to works; 4-inch to village.

CONSUMPTION

Supply to 50 people; street hydrants. Stated average daily consumption 31,000 gallons; 1,000 domestic, and 30,000 industrial to coal and coke company. No means of measurement.

CRAMER (EAST WHEATFIELD TWP.), INDIANA COUNTY

FINDLEY RUN WATER SUPPLY COMPANY

Estimated 1915 population, 400a

LOCATION

Southeastern corner Indiana County, along Findley Run, tributary of Conemaugh River, about 0.5 mile from Pennsylvania railroad; along north bank of river.

INDUSTRIES

Mining village of Cramer Coal, Coke and Stone Co.

WATER SUPPLY

Findley Run Water Supply Co., incorporated 1905 for East Wheatfield Township. Operations of coal company suspended temporarily, but will probably be resumed during 1915, when the water company will furnish a supply to boilers and to 75 families. Source of supply is intake on Findley Run, 2 miles north of village.

CRESSON BOROUGH, CAMBRIA COUNTY

MUNICIPAL WATER WORKS

(Supplies also from four water companies and from one private source.)

Population 1910 census, 1,470; incorporated 1906. Estimated 1915, 1,800a

LOCATION

Central eastern Cambria County, adjoining Sankerton Borough; terminus of Cambria & Clearfield Branch and Cresson & Irvona Branch of Pennsylvania R. R. Built-up portion on plateau at headwaters of branch of Little Conemaugh River; elevations 2,000 to 2,500.

INDUSTRIES

Coal mines and coke ovens, electrical machine works. Overlooking Cresson, at highest part of plateau, is land presented to State by Andrew Carnegie for use as State Sanatorium for Tuberculosis.

WATER SUPPLY

Municipal water works, supplying greater part of borough.

Summit Water Supply Co., of Pennsylvania R. R. has two 12-inch mains through borough.

Cresson Water Co., incorporated 1896 for Cresson Township.

Ivy View Water Co., incorporated 1903 as Foundry Water Co., for Cresson Township.

Rebecca Water Co., incorporated 1901 for Cresson Twp.

Private system of Luther & O'Brein.

MUNICIPAL WATER WORKS

Water purchased from Summit Water Supply Co. (Bear Rock Run Supply), distributed through 6-inch laterals from 12-inch trunk main through borough. Average daily consumption, as measured by meter, stated to be 44,000 gallons; probably 1,500 persons supplied.

SUMMIT WATER SUPPLY COMPANY (Pennsylvania R. R.)

(See complete description under Pennsylvania Railroad).

Two 12-inch mains through borough from Bear Rock Run supply; supply for borough system, railroad offices, station and roundhouse.

CRESSON WATER COMPANY

Four springs east of borough, at elevation 2,185, collected in 1,500,000 gallon reservoir. Water soft. Distributed by gravity through about 1 mile 6-inch main; 12 fire hydrants. Supply to 100 people; 16 taps. Average daily consumption probably 3,000 gallons, all domestic.

REBECCA WATER COMPANY

Two springs near Keystone Avenue, in central part of borough, at elevation 50 feet above the district supplied. Water by gravity through 2-inch pipe about 0.5 mile to one house and a hotel; pressure 10 pounds. Supplies 20 people with probably 500 gallons daily.

PRIVATE SYSTEM OF LUTHER & O'BREIN

Old brewery well, 6-inches diameter and 190 feet deep, in eastern part of borough, on hillside; deep well pump raises water to two 4,000 gallon tanks. About nine families supplied with probably 1,000 gallons daily.

IVY VIEW WATER COMPANY

Supply for boiler and cooling purposes at a foundry which owns the company.

DERRY BOROUGH, WESTMORELAND COUNTY

DERRY WATER COMPANY
(Westmoreland Water Co.)

Population 1910 census, 2,954; increase since 1900, 607. Estimated 1915, 3,250a

LOCATION

Eastern Westmoreland County, near headwaters of McGee Run, tributary of Conemaugh River; on Pennsylvania R. R. and Westmoreland County R. R. Built-up portion comparatively level; elevations 1,150 to 1,280.

INDUSTRIES

Bituminous coal mining.

WATER SUPPLY

Derry Water Co., incorporated 1887 for Derry Borough; purchased 1913 by Westmoreland Water Co., Greensburg.

SOURCE AND COLLECTION

(1) McGee Run; two reservoirs near headwaters 1 mile southeast of borough; watershed area 1 square mile. Capacity of lower reservoir 2,225,000 gallons at elevation 1,386, of upper reservoir 2,500,000 gallons, at elevation 1,428.

(2) Millwood Run, tributary to McGee Run, 2 miles northeast of borough; 100,000 gallon reservoir 1,25 miles above mouth, at elevation 1,388; watershed area 1.8 square miles. Company also appropriated Trout Run, tributary of McGee Run, at Hillside, 4 miles northeast of borough; not using same at present.

(3) Ethel Springs, small tributary of McGee Run just west of borough; 156,000,000 gallon storage reservoir, at elevation 1,175, just outside of borough; watershed area 40 acres; 600,000 gallon distributing reservoir below at elevation 1,229.

Pumping station at storage reservoir used about 8 hours per day during dry seasons; equipment two 1,000,000 gallon 6-inch centrifugal pumps connected to 25 hp. and 100 hp., Westinghouse electric motors, and Smith-Vaile duplex pump with 25 hp. Erie boiler in reserve. All water soft.

DISTRIBUTION

By gravity from all sources, Ethel Springs distributing reservoir used as low service to coal companies. There are 3.4 miles delivery

mains, 6-inch to 12-inch, 66% 6-inch; pressures 50 to 100 pounds; 6.8 miles distributing mains 4-inch to 10-inch, 58% 4-inch; 1.4 miles outside borough; 31 fire hydrants, $5\frac{3}{4}$-inch.

CONSUMPTION

Supply to 3,250 people in borough and 300 outside; 800 taps, one domestic and six industrial metered. Average daily consumption 350,000 gallons 50% industrial and metered.

Supplies Ligonier Coal Co., Derry Coal Co., No. 2, and Latrobe-Connellsville Coal Co.

EAST CONEMAUGH AND FRANKLIN BOROUGHS, CAMBRIA COUNTY

CONEMAUGH AND FRANKLIN WATER SUPPLY COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
East Conemaugh,	5,046	2,871	6,500
Franklin,	2,102	1,141	2,700

LOCATION

Adjoining boroughs in southwestern Cambria County, on opposite sides of Little Conemaugh River, just outside Johnstown City line on northeast; on Pittsburgh Division of Pennsylvania R. R., Southern Cambria Ry. and Johnstown Traction lines. Built-up portion in narrow valley, with side hills rising steeply on each side of river; elevations 1,212 and 1,460 feet.

INDUSTRIES

Franklin plant of Cambria Steel Co.

WATER SUPPLY

Conemaugh and Franklin Water Co., a merger in 1907 of Conemaugh and Franklin Water Co., incorporated 1893 for Conemaugh Borough, and Maple Water Co., incorporated 1904 for Franklin Borough.

Cambria Steel Co.'s plant supplied by private sources and by Manufacturers Water Co., incorporated 1900 for Cambria County by Cambria Steel Co. This company also supplied Johnstown plant by separate system. (See complete description under Johnstown.)

CONEMAUGH AND FRANKLIN WATER COMPANY

SOURCE AND COLLECTION

(1) Clapboard Run, tributary of Little Conemaugh River, from east at Franklin; storage reservoir, capacity 2,500,000 gallons, 1.75 miles east of Franklin, at elevation 1,641; watershed area 3.33 square miles.

A 50,000,000 gallon storage reservoir is being constructed on this watershed. Filters also to be used in connection with the supply. During 1914 drought it was necessary to purchase water for about 3 months from Johnstown Water Co.; Salt Lick Reservoir supply.

(2) Three 8-inch drilled wells, used as auxiliary supply in dry seasons, 105, 108 and 405 feet deep, near east end of Main Street, in Franklin; average flow 1,000,000 gallons daily; minimum 100,000 gallons. Water very hard. Water raised into pump well by Ingersoll-Rand air compressor and pumped through two filters into mains by Wilson-Snyder duplex pump; 125 and 150 hp. Erie City boilers.

DISTRIBUTION

From (1) by gravity through 10-inch main, 3,400 feet, reducing to 8-inch for 3,200 feet.

From (2) by pumping through 6-inch main 70 feet long.

Pressures 120 to 130 pounds; 3.2 miles distributing mains and 21 fire hydrants in East Conemaugh, 1.2 miles distributing mains and 14 fire hydrants in Franklin.

CONSUMPTION

	East Conemaugh	Franklin	Total
Population supplied,	6,500	2,700	9,200
Number of taps,	1,000	174	1,174
Meters,	456	174	630
Average daily consumption,	382,500	67,500	450,000
Average industrial consumption,	17,600	----------	17,600

Consumption measured by meter at pumping station.

EBENSBURG BOROUGH, CAMBRIA COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,978; increase since 1900, 404. Estimated 1915, 2,000

LOCATION

County seat, eastern Cambria County, along a tributary of Roaring Run, tributary of North Branch Little Conemaugh River; on Cresson Division of Pennsylvania R. R. and Southern Cambria Ry.

WATER SUPPLY

Municipal works built in 1892.

SOURCE AND COLLECTION

Eleven springs forming headwaters of small tributary of Black Lick Creek, 1.5 miles north of borough; water piped to 75,000 gallon collecting reservoir; pumped to two distributing reservoirs, capacities 450,000 and 175,000 gallons, 1 mile northwest of borough, on ridge 150 feet above. Auxiliary storage reservoir, near pumping station, receives overflow from springs. Two drilled wells near pumping station; water pumped to receiving reservoir. Water soft.

DISTRIBUTION

By gravity through 6-inch main; pressures 20 to 50 pounds; 4 miles distributing mains, 2-inch to 6-inch; 49 fire hydrants.

CONSUMPTION

Supply to 1,800 people; 524 taps. Consumption not known; assuming 30 gallons per capita, would be 54,000 gallons daily, all domestic.

ETNA BOROUGH, ALLEGHENY COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 5,830; increase since 1900, 446. Estimated 1915, 5,830a

LOCATION

Central Allegheny County, along north bank of Allegheny River, at mouth of Pine Creek, opposite city of Pittsburgh; on Pennsylvania R. R.; Baltimore & Ohio R. R. and Pittsburgh Rys.

WATER SUPPLY

Municipal plant built in 1888; rebuilt in 1911.

SOURCE AND COLLECTION

Allegheny River; timber filter crib, 170 feet long, 30 feet wide and 10 feet deep; 225 feet of 20-inch intake pipe. Water pumped through 1 mile of 14-inch force main into two 282,000 gallon steel tanks, at elevation 278 feet above pumps. Pumping equipment 3,500,000 duplex pump, 1,500,000 gallon duplex pump and three 175 hp. water tube boilers. Water medium hard.

DISTRIBUTION

By gravity through 12-inch main; pressures 75 to 125 pounds; 4 miles distributing mains 4-inch to 12-inch; 68 fire hydrants.

CONSUMPTION

Supply to 4,000 people through 740 taps; 130 metered, 8 industrial. Average daily consumption 1,100,000 gallons, 90% domestic and 10% industrial; estimated by pump displacement. Metered consumption 10,000 gallons industrial and 50,000 gallons domestic.

COST AND REVENUE

Total cost of works, $100,000; annual operating expenses, $9,000; gross revenue, (1913) $16,840.

FREEPORT BOROUGH, ARMSTRONG COUNTY

FREEPORT WATER WORKS COMPANY

Population 1910 census, 2,248; increase since 1900, 494. Estimated 1915, 2,700a

LOCATION

Extreme southwestern corner of Armstrong County, just below junction of Kiskiminitas and Allegheny rivers; on Conemaugh Division of Pennsylvania R. R. and Pittsburgh, Shawmut & Northern R. R. Range in elevation of built-up portion 150 feet.

INDUSTRIES

Two planing mills and two distilleries; coal mines directly across Buffalo Creek.

WATER SUPPLY

Freeport Water Works Co., incorporated 1883 for Freeport Borough.

SOURCE AND COLLECTION

Allegheny River; intake and pumping station below mouth of Kiskiminitas River, 1 mile east of borough. Pumping equipment 1,000,000 gallon Gould pump, auxiliary 1,500,000 gallon Worthington steam pump, 80 hp. gas engine, one 125 hp. boiler. Water pumped from 8-inch and 12-inch suctions in river through 10-inch force main 2,980 feet, to 254,000 gallon settling basin on top of river bluffs above pumping station; flows by gravity through two 500,000 gallon mechanical filter units to two 100,000 gallon wooden distributing tanks. Water medium hard.

DISTRIBUTION

By gravity through two 6-inch and one 4-inch main; pressures 60 to 90 pounds; 7.1 miles distributing mains, 2-inch to 6-inch, 32% 6-inch and 32% 4-inch; 25 fire hydrants, 4-inch.

CONSUMPTION

Supply to 2,000 people; 663 taps, 33 domestic and 23 industrial metered. Average daily consumption 600,000 gallons, 70% domestic and 30% industrial, measured by pump displacement.

INDUSTRIAL

A. Guckenheimer & Bros. Distillery No. 1 has private system for industrial supply.

GRACETON (CENTER TWP.), INDIANA COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 650a

LOCATION

Southern Indiana County, Center Township, along Two Lick Creek; on Indiana Branch, Conemaugh Division of Pennsylvania R. R. and Indiana County Street Rys. Elevations in built-up section 1,055 to 1,120.

INDUSTRIES

Operations of Graceton Coke Co.; 202 coke ovens.

WATER SUPPLY

Private system of Graceton Coke Co.

SOURCE AND COLLECTION

(1) Thirteen drilled wells, 35 to 50 feet deep; water pumped by hand and used for drinking and cooking purposes.

(2) Two Lick Creek and small stream in ravine on Chestnut Ridge, east of coke ovens; water from creek pumped through 10-inch force main 3,300 feet to 6,000,000 gallon reservoir, at elevation 1,148, in ravine. Pumping equipment two 1,440,000 gallon Epping-Carpenter pumps, one 60 hp. and one 125 hp. boilers. Water from reservoir pumped into three 50,000 gallon tanks, at elevation 1,261. Water medium hard; treated by Scaife filter for boiler feed use.

DISTRIBUTION

By gravity from tanks through 4-inch line to houses for other than drinking and cooling water, and to boilers and mines Pressures 50 to 100 pounds; 2.1 miles distributing mains, 1-inch to 4-inch; 15 fire hydrants.

CONSUMPTION

Supply to 650 people in 63 double houses; one drilled well for every six houses. Average daily consumption 700,000 gallons, 3% domestic and 97% industrial; measured by pump displacement. Supply to Pennsylvania R. R. 6,200 gallons daily.

GREENWALD (SALEM TWP.), WESTMORELAND COUNTY

DONOHOE WATER COMPANY
(Donohoe Coke Co.)

Estimated 1915 population, 500a

LOCATION

Northern Central Westmoreland County along Crabtree Creek, tributary of Loyalhanna Creek; on Alexandria Branch, Pittsburgh Division, Pennsylvania R. R. and West Penn Rys.

INDUSTRIES

Donohoe Coke Co., 193 coke ovens.

WATER SUPPLY

Donohoe Water Co., incorporated 1902 for Salem Township by Donohoe Coke Co.

SOURCE AND COLLECTION

(1) Graham Run, small tributary of Crabtree Creek; 31,000,000 gallon reservoir near mouth of stream and village. Water pumped from 6-inch suction 500 feet long, through 4-inch force main 500 feet long, into 33,000 gallon wooden distributing tank and 100,000 gallon reservoir, both at elevation 1,070. Water soft.

Flowing well 1 mile southeast of village, elevation 1,050, at junction of Bridges and Crawford forks of Graham Creek; reported 75,000 gallons daily, uniform flow, to large reservoir.

(2) Kellar Creek; intake diverts water to 100,000 gallon reservoir, which may also be fed by main reservoir of (1). Electrically operated pumps lift water through 4-inch force main 1,500 feet into 100,000 gallon tank, at elevation 1,100; 4-inch branches to fire hydrants and distributing system.

DISTRIBUTION

From (1) by gravity through 6-inch main 3,000 feet to coke ovens.

From (2) by pumping to system, with connection to equalizing reservoir.

Pressures 10 to 100 pounds; 1.1 miles distributing mains, 1-inch to 4-inch; 10 fire hydrants, 2½-inch and 1½-inch.

CONSUMPTION

Supply to 500 people; 100 taps. Stated average consumption 168,000 gallons daily, 21% domestic and 79% industrial. No means

of measurement. Industrial supply 10,000 gallons daily to Pennsylvania R. R., 40,000 gallons to coke ovens and 35,000 to boilers. At times supply to Jamison Coal & Coke Co.

INDUSTRIAL

Keystone Coal Co., in vicinity, has private system for industrial supply.

HANNASTOWN (SALEM TWP.), WESTMORELAND COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 1,600b

LOCATION

Central Westmoreland County, along Crabtree Creek, tributary of Loyalhanna Creek; on Pennsylvania R. R.

INDUSTRIES

Coal mine and coke ovens of Jamison Coal & Coke Co.

WATER SUPPLY

Private system of Jamison Coal & Coke Co.

SOURCE AND COLLECTION

(1) Small tributary of Crabtree Creek; 20,000,000 gallon reservoir west of village.

(2) Drilled well north of village; water pumped to tanks nearby.

DISTRIBUTION

From (1) by gravity to coke plant, where it is pumped to mine; used for industrial purposes only.

From (2) by gravity to street hydrants.

CONSUMPTION

Supply to 74 double houses near mine and 108 double and 5 single houses near coke plant through street hydrants.

HEILWOOD (PINE TWP.), INDIANA COUNTY

PINE TOWNSHIP WATER COMPANY
POSSUM GLORY WATER COMPANY

(Pennsylvania Steel Company of New Jersey)
Estimated 1915 population, 2,500a

LOCATION

Eastern Indiana County, Pine Township, near headwaters of Yellow Creek; on Cherry Tree & Dixonville R. R. Built-up section on hill, at elevation 1,777.

INDUSTRIES

Mining village of Penn Mary Coal Co.

WATER SUPPLY

Pine Township Water Co., incorporated 1903 for domestic purposes in Pine Township; Possum Glory Water Co., incorporated same date for industrial purposes in Pine Township. Two systems are same, built in 1906; owned by Pennsylvania Steel Co. of New Jersey.

SOURCE AND COLLECTION

(1) Four 8-inch drilled wells, 140 feet deep, cased 40 feet through coal seam; water pumped direct to system by four 360,000 gallon electrically driven deep well pumps. Water medium hard.

(2) Yellow Creek, held in reserve for emergencies; earthen dam just above mine impounds 1,000,000 gallons; 8-inch gravity main 100 feet to pumping station at power house of coal company. Pumping equipment two 720,000 gallon Smith-Vaile duplex pumps.

DISTRIBUTION

By pumping direct through 8 inch force main, with 8-inch connection to 55,000 gallon wooden equalizing tank, on hilltop, at elevation 300 feet above pumps; pressures 35 to 100 pounds; 2.4 miles distributing mains, 4-inch to 8-inch; 24 fire hydrants, 4-inch and 2½-inch.

CONSUMPTION

Supply to 2,300 people; 171 taps. Average daily consumption 175,000 gallons domestic, measured by pump displacement; 500 gallons industrial for steam purposes.

HOOVERSVILLE BOROUGH, SOMERSET COUNTY

HOOVERSVILLE WATER COMPANY

Population 1910 census 990; increase since 1900, 525. Estimated 1915, 1,800a

LOCATION

Central northern Somerset County, along Stony Creek, at mouth of Fallen Timber Run; on Baltimore & Ohio R. R., Somerset & Cambria Branch.

INDUSTRIES

Bituminous coal mines of Knickerbocker Coal Co. and Federal Coal Co.; flour mill and planing mill.

WATER SUPPLY

Hooversville Water Co., incorporated 1912 for Hooversville Borough.

SOURCE AND COLLECTION

Fallen Timber Run, tributary of Stony Creek, at borough; 500,000 gallon reservoir, south of borough, 1 mile from mouth.

DISTRIBUTION

By gravity through 8-inch main, 3,648 feet long; pressure 65 pounds; 2.6 miles distributing mains, 4-inch to 8-inch, 91% 4-inch; no fire hydrants.

CONSUMPTION

Supply to 1,000 people; 85 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 30,000 gallons daily, all domestic. Supplies Hooversville Heat, Light and Power Co. 75,000 gallons per day.

INDIANA BOROUGH, INDIANA COUNTY

CLYMER WATER COMPANY OF INDIANA

Population 1910 census 5,749; increase since 1900, 1,607. Estimated 1915, 6,500a

LOCATION

County seat, western central Indiana County, on tributary of Two Lick Creek; on Indiana Branch, Conemaugh Division of Pennsylvania R. R., Buffalo, Rochester & Pittsburgh R. R. and Indiana County Street Rys. Built-up area on flat land at headwaters of tributary; 60 feet range in elevation.

INDUSTRIES

Bituminous coal mining and agricultural district; two foundries, two grist mills, car factory, ladder factory, macaroni factory, enameling works, glass works and woolen mill. Seat of Indiana State Normal School.

WATER SUPPLY

Clymer Water Co. of Indiana, incorporated 1886 for borough of Indiana; first source of drilled wells abandoned.

SOURCE AND COLLECTION

Two Lick Creek; intake 2.5 miles southeast of borough, about 0.5 mile below mouth of Ramsey Run; large dam of Indiana Country Club 0.5 mile above intake. Pumping station on north bank of creek; 12-inch intake pipe from creek to intake well. A 1,000,000 gallon centrifugal pump lifts water to 141,600 gallon settling basin in four parts; flows through two-unit mechanical filter to well underneath, capacity 30,000 gallons. Four Snow duplex pumps, capacities 384,000 gallons and 840,000 gallons per day, pump water through 6-inch and 10-inch mains, each 2 miles long, to 3,000,000 gallon distributing reservoir, on hilltop east of borough line; two 70,000 gallon iron tanks used for auxiliary purposes. Water medium hard.

DISTRIBUTION

By gravity through 12-inch main; pressures 65 to 110 pounds; 15 miles distributing mains, 2-inch to 12-inch; 83 fire hydrants, 4-inch.

CONSUMPTION

Supply to 5,000 people; 1,200 taps. Average daily consumption 400,000 gallons, 25% industrial to woolen mill and Buffalo, Rochester & Pittsburgh R. R., measured by pump displacement.

INDUSTRIAL SUPPLY

State Normal School, brewery, cold storage and ice plant have private supplies.

HISTORICAL

Before West Indiana Borough was consolidated with Indiana Borough it received a supply of water from Clymer Water Co. of West Indiana, incorporated 1886; after consolidation the company was sold to the Clymer Water Co. of Indiana.

ISELIN (YOUNG TWP.), INDIANA COUNTY

PRIVATE SUPPLY

LOCATION

Southwestern Indiana County, along Harpers Run, tributary of Blacklegs Creek; on Buffalo, Rochester & Pittsburgh R. R.

WATER SUPPLY

Private system of Pittsburgh Gas Coal Co.

Source of supply Harpers Run; intake reservoir 0.25 mile northwest of village; filter plant just below. Blacklegs Creek; intake and pumping station 2 miles south of village, at Clarksburg.

JEROME (CONEMAUGH TWP.), SOMERSET COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 1,000b

LOCATION

Northwestern Somerset County, on divide between Bens Creek and Quemahoning Creek; on Baltimore & Ohio R. R.

INDUSTRIES

Operations of Merchants Coal Co.

WATER SUPPLY

Private system of Merchants Coal Co.

SOURCE AND COLLECTION

Spring in mine shaft water pumped by 500,000 gallon pump to tank outside.

DISTRIBUTION

By gravity through 4-inch pipe to street hydrants.

CONSUMPTION

Supply to 1,000 people through street hydrants. Average daily consumption 36,000 gallons, all domestic.

JOHNSTOWN CITY, NEARBY BOROUGHS AND VILLAGES, CAMBRIA COUNTY

JOHNSTOWN WATER COMPANY
(Cambria Steel Co.)

MANUFACTURERS WATER COMPANY
(Cambria Steel Co.)

MORRELLVILLE AND CAMBRIA BOROUGH WATER COMPANY

THE WALNUT GROVE WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915 population
Johnstown,	55,482	19,546	70,000a
Dale,	2,285	782	4,000a
Daisytown,	382	(dec. 53)	500a
Ferndale,	514	290	1,500a
Rosedale,	419	33	600a
Westmont,	1,468	969	2,200a
Total,	60,550	21,567	78,800a

LOCATION

Southeastern Cambria County, at junction of Stony Creek with Little Conemaugh River to form Conemaugh River; on Pennsylvania R. R. and Baltimore & Ohio R. R. and Southern Cambria Railway and Johnstown Traction lines. Built-up portion of city level for most part with portion running up on side hills; elevations 1,148 to 1,600.

INDUSTRIES

Ranks third in State in value of manufctured products. Chief industry, manufacture of steel and its products; coal mining and manufacture of radiators, stoves and brick; brake beam works and cigar factory.

WATER SUPPLY

Johnstown Water Co., incorporated 1866 for territory now Johnstown City; majority of stock owned by Cambria Steel Co.

Manufacturers Water Co., incorporated 1900 for commercial purposes in Cambria County; owned by Cambria Steel Co.; industrial supply only.

Morrellville and Cambria Borough Water Co., incorporated 1888 for Cambria Borough and vicinity, now a part of Fifteenth, Sixteenth, Eighteenth, Nineteenth and Twentieth Wards of Johnstown.

Private system of Moses Weaver (of Holsopple, Pa.), installed in 1908; supplies portion of that part of Eighth Ward formerly Roxbury Borough.

The Walnut Grove Water Co., incorporated 1910 for Stony Creek Township; supplies portion of that part of Seventeenth Ward formerly Walnut Grove Village; operating previous to incorporation.

JOHNSTOWN WATER COMPANY

SOURCE AND COLLECTION

(1) Dalton Run, tributary of Bens Creek; storage reservoir 1.13 miles above mouth and 5 miles southwest of center of city. Gravity 16-inch main, 5,400 feet long, enlarging to 20-inch for 11,700 feet to Bens Creek sterilization plant, near mouth of Mill Creek; cross-connected to 20-inch gravity main from Mill Creek reservoirs.

(2) Mill Creek, tributary of Bens Creek about 2 miles below Dalton Run and 0.5 mile above confluence of Bens Creek and Little Conemaugh River; two storage reservoirs, 3 miles southwest of center of city, upper about 2 miles above mouth and lower about 1½ miles above mouth. Gravity 36-inch main 2,832 feet long, from upper reservoir, connecting to 20-inch main from lower reservoir, extending 7,800 feet to Bens Creek sterilization plant. A 20-inch main 14,050 feet long and 30-inch main 18,650 feet long extend from sterilization plant to distributing system.

(3) St. Clair Run, tributary of Conemaugh River, near northwestern city line; storage reservoir about 1.5 miles above mouth and 2.5 miles west of center of city. Gravity 12-inch main 17,100 feet to distributing system.

(4) Saltlick Run, tributary of Little Conemaugh River, 6 miles northeast of center of city; storage reservoir 0.33 mile above mouth. Gravity 20-inch main 10,629 feet long; 24-inch 3,688 feet; 20-inch 8,290 feet; 24-inch 890 feet, to point 0.84 mile northeast of city line, where it divides into 20-inch 8,270 feet long, and 24-inch 3,251 feet long, reducing to 16-inch for 5,705 feet, thence 24-inch 4,687 feet to distributing system; 20-inch and 24-inch mains cross-connected by a 24-inch, 420 feet long, 0.33 mile northeast of city line.

(5) Laurel Run, tributary of Conemaugh River, 3 miles northwest of center of city; intake 4.5 miles north of center of city. Gravity 24-inch main 5,361 feet, reducing to 16-inch, 9,500 feet to distributing system.

(6) Red Run, tributary of Laurel Run; intake 0.75 mile northwest of Laurel Run intake. Gravity 16-inch pipe, 1,842 feet long, reducing to 8-inch, 1,777 feet to connection with Laurel Run 24-inch main.

(7) Wild Cat Run, tributary of Laurel Run below Laurel Run intake; intake 0.75 mile above mouth. Gravity 10-inch main 4,050 feet to connection with Laurel Run 16-inch line.

RESERVOIRS AND INTAKES

Name	Date of construction	Area of watershed (sq. mi.)	Reported minimum flow of stream (gals.)	Elevation spillway	Capacity (million gallons)
Dalton Run res.,	1901	4.26	213,000	1,485	130
Mill Creek, No. 2 res.,	1898	5.00	323,000	1,423	97
Mill Creek, No. 1 res.,	1885	6.46	----------	1,357	32
St. Clair res.,	1879	4.85	194,000	1,353	15
Saltlick res.,	1913	11.92	600,000	1,485	813
Wild Cat intake,	1913	0.63	44,000	1,525	----------
Red Run intake,	1913	1.88	131,000	1,525	----------
Laurel Run intake,	1910	7.40	370,000	1,410	----------

Water from intakes treated with hypochlorite. All water soft.

DISTRIBUTION

One main service, comprising 80% of territory supplied, and four small high service residential districts supplied by three pumping stations; two small high service districts outside of city supplied by pumping; emergency connections with mains of Manufacturers Water Co. Elevations in main service 1,150 to 1,330.

Prospect pumping station, 0.75 mile northwest of center of city, at Cambria steel works, supplied from 12-inch main service pipe under 60 pounds pressure. Equipment two 400,000 gallon Worthington duplex pumps. Water pumped to upper Prospect tanks, on Prosser Street near Master Street, elevation 1,604, capacity 100,000 gallons. Elevations in district 1,160 to 1,500. Station also pumps to Lower Prospect tank, on Collins Street, near Danite Alley, elevation 1,392.5, capacity 110,000 gallons. Elevations in district 1,200 to 1,360.

Westmont pumping station, 0.5 mile southwest of center of city, supplied from 10-inch main service pipe under 55 pounds pressure. Equipment 350,000 gallon Goulds triplex pump direct-connected to 60 hp. Otto gas engine, a reserve 400,000 gallon Worthington duplex pump with two 50 hp. Erie City tubular boilers. Water pumped to Westmont tank, outside city, or Sixth Ward tank, on Barclay Street, near Devine Alley; elevation 1,380, capacity 10,000 gallons. Elevations in district 1,250 to 1,350.

Roxbury pumping station, 2 miles south of center of city; supplied from 6-inch main service pipe under 40 pounds pressure. Equipment two 350,000 gallon Gould triplex pumps, belt-connected to 30 hp. Otto gas engine. Elevations in district 1,260 to 1,540.

Pressures as follows:

District	Average	Minimum	Maximum
Main service,	64	25	94
Upper Prospect service,	82	73	91
Lower Prospect service,	40		
Sixth ward service,	44		
Roxbury service,	57	45	61
Whole city,	62	25	94

Supply mains as follows:

Size (inches),	8	10	12	16	20	24	30	36	Total
Length (miles),	0.4	0.9	5.0	7.8	11.5	4.8	3.5	0.5	34.4

Distributing mains as follows:

Size (inches),	4	6	8	10	12	16	Total
Length (miles),	41.2	21.6	3.88	1.01	1.26	1.81	70.76
Per cent.,	58.2	30.5	5.5	1.4	1.8	2.6	100.0

There are 232 fire hydrants, 77 4-inch valves and 4½-inch or 5-inch barrels; others 6-inch valves and 7-inch barrels.

CONSUMPTION

Supply to 66,700 people; 12,144 taps, 3,017 metered. Average daily consumption 9,820,000 gallons, measured by Venturi meters on all supply lines; maximum 11,840,000 gallons.

MANUFACTURERS WATER COMPANY

SOURCE AND COLLECTION

(1) Quemahoning Creek, tributary of Stony Creek, in Somerset County, 12 miles south of Johnstown City; storage reservoir, capacity 10,922,000,000 gallons, just above mouth, elevation 1,620; watershed area 92 square miles. Water soft.

(2) Hinckston Run, tributary of Conemaugh River, in northwestern part of city; storage reservoir, capacity 1,124,000,000 gallons, 2.5 miles north of city, elevation 1,396; watershed area 10.75 square miles. Water soft.

(3) Stony Creek, joining Little Conmaugh River in city to form Conemaugh River; intake dam 7.5 miles south of city, at elevation 1,364; watershed area 290 square miles. Water soft.

DISTRIBUTION

From (1) by gravity through 66-inch riveted steel pipe, 12 miles to city.

From (2) by gravity through 24-inch cast iron pipe, 2.5 miles to city.

From (3) by gravity through 36-inch cast iron pipe, 7.5 miles to city; cross-connected to 66-inch supply line by 50-inch line 2,568 feet long.

Seven connections with mains of Johnstown Water Co. provided for emergencies; 17 public fire hydrants; pressures 30 to 75 pounds.

CONSUMPTION

Supply entirely industrial to 34 taps. Average daily consumption 92,000,000 gallons; maximum 105,000,000 gallons; measured by meters. Supply Franklin and Johnstown plants of Cambria Steel Co., Baltimore & Ohio R. R., Pennsylvania R. R., Crescent Pipe Line Co., Packard Motor Car Co., Johnstown Railway Co., Johnstown face brick Co., Lorain Steel Company and produce companies.

PRIVATE SUPPLY, CAMBRIA STEEL COMPANY

The Cambria Steel Co. has private system for industrial supply, in addition to that of Johnstown Water Co. and Manufacturers Water Co.

Total consumption for 1913 34,304,000,000 gallons; 33,506,000,000 gallons being from Manufacturers Water Co., 268,000,000 gallons from

Johnstown Water Co. and 530,000,000 gallons from private system, including water repumped before leaving works.

Sources of supply as follows:

(1) Peggys Run; a small equalizing reservoir 0.5 mile south of Franklin; receives flow of stream from small watershed.

(2) Conemaugh River; water pumped by Coopersdale pumps, in northwestern part of city, and by Cambria pumps for blast furnaces a short distance above; used entirely for cooling purpses.

(3) Little Conemaugh River; water pumped by centrifugal pumps at Gautier Department, in central part of city, on south bank of Little Conemaugh; repumped by Franklin Supply pumps, for use at Franklin plant.

(4) Little Conemaugh River gravity source; not normally used because of large amount of sulphur in water which requires special treatment before being used. Supply maintained for emergencies, being replaced by Hinckston Run supply of Manufacturers Water Co. Intake dam 5 miles northeast of Franklin and 0.5 mile below South Fork borough, at elevation 1,455; water can be delivered by gravity through 6.4 miles of wood-stave pipe 44-inch, reducing to 36-inch, to Franklin plant.

Ninety-five per cent. of all water discharged back into stream at temperature of 20 degrees above that at intake.

MORRELLVILLE AND CAMBRIA BOROUGH WATER COMPANY

SOURCE AND COLLECTION

Strayers Run, tributary of St. Clair Run, near its mouth, northwest of city. Earth dam with clay core impounds 2,000,000 gallons, at elevation, 1,376, just beyond city limits; watershed area 1.12 square miles; reported minimum flow 118,720 gallons daily by weir measurement. Water soft.

Auxiliary supply during dry seasons from pumping station near St. Clair Run, at F and Chandler Streets. Water raised from two 10-inch wells, 352 and 404 feet deep, by air-lift to 16,000 gallon pump well, from which two Worthington pumps, 150,000 and 250,000 gallons daily capacity, pump into 10-inch supply main from reservoir; 50 and 80 hp. Erie tubular boilers.

DISTRIBUTION

By gravity through 10-inch main; auxiliary supply by pumping. No connections with any other system. Pressures 40 to 85 pounds; 8 fire hydrants, 4-inch and 6-inch. Pipe system including supply line as follows:

Size (inches),	10	8	6	4	Total
Length (miles),	0.9	1.0	0.1	2.0	4.0

CONSUMPTION

Supply to 1,200 people; 248 taps, 2 metered industrial. Stated daily consumption 250,000 gallons, 90% domestic and 10% industrial. No means of measurement.

PRIVATE SYSTEM OF MOSES WEAVER

SOURCE AND COLLECTION

(1) Spring in sandstone formation on southern slope of Cherry Run ravine, just southwest of Roxbury; water collected in 41,100 gallon reservoir. Water soft.

(2) Spring 800 feet southwest of first; water collected in 44,400 gallon reservoir. Water soft.

DISTRIBUTION

(1) By gravity through 2-inch pipe 500 feet long; 3,000 feet 2-inch and 1¼-inch pipe.

(2) By gravity through 1½-inch pipe 1,400 feet to Roxbury Park, a summer amusement resort.

No fire hydrants.

CONSUMPTION

Supply to 250 people; 60 taps. Stated daily consumption 3,500 gallons, all domestic. No means of measurement.

THE WALNUT GROVE WATER COMPANY

SOURCE AND COLLECTION

Six springs on hill south of territory supplied; water collected in 27,000 gallon reservoir. Capacity of springs 40,000 gallons daily.

DISTRIBUTION

By gravity through 4-inch main; pressure 60 pounds; no fire hydrants.

CONSUMPTION

Supply to 125 people; 25 taps. Stated consumption 25,000 gallons daily, all domestic. No means of measurement.

JOSEPHINE (BLACKLICK TWP.), INDIANA COUNTY

JOSEPHINE WATER COMPANY

FURNACE WATER COMPANY
(Josephine Furnace & Coke Co.)

Estimated 1915 population, 1,100a

LOCATION

Southern Indiana County, along Black Lick Creek; on Pennsylvania R. R., Buffalo, Rochester & Pittsburgh R. R. and Indiana County Street Rys.

INDUSTRIES

Operations of Josephine Furnace & Coke Co.; three furnaces and Conemaugh & Blacklick Ry.

WATER SUPPLY

Josephine Water Co., incorporated 1906 for Township of Burrell, domestic supply. Furnace Water Co., incorporated 1907 for industrial purposes in Burrell Township.

JOSEPHINE WATER COMPANY

SOURCE AND COLLECTION

A 10-inch drilled well, 108 feet deep, at furnace; water raised by air-lift into tank; pumped through 6-inch force main to elevated iron tank 135 feet high, capacity 100,000 gallons. Pumping equipment a 400,000 gallon Platt pump, a Harris air-lift pump and an Ingersoll-Rand air compressor. Water medium hard.

DISTRIBUTION

By pumping direct to system, or by gravity from tank; pressures 50 to 60 pounds; 4.5 miles distributing mains, ½-inch to 6-inch; 17 fire hydrants.

CONSUMPTION

Supply to 1,000 people; 320 taps. Average daily consumption 33,000 gallons; maximum 44,000, minimum 22,000; all domestic; measured by displacement in tank.

FURNACE WATER COMPANY

SOURCE AND COLLECTION

(1) Six drilled wells, about 100 feet deep, with 8-inch and 10-inch casings; water raised by air-lift into 20,000 gallon cistern; pumped to boilers; chemically treated before feeding to boilers.

(2) Black Lick Creek; concrete dam above plant; 24-inch intake pipe to a cistern; water pumped through 18-inch force main to standpipe 20 feet diameter and 85 feet high; capacity of reservoir 4,000,000 gallons. Pumping equipment two 6,000,000 gallon Gordon pumps, one 7,200,000 gallon Jeanesville centrifugal pump, one 4,300,000 gallon DeLaval centrifugal pump, and one 6,000,000 gallon Wilson-Snyder centrifugal pump. Water medium hard.

DISTRIBUTION

Boiler supply separate from cooling and condensing supply to furnace; latter supplied by gravity from standpipe, 75% being returned; pressure 35 pounds; 2 fire hydrants.

CONSUMPTION

Industrial supply to furnace; 75 taps. Average daily consumption 6,000,000 gallons; maximum 7,000,000, minimum 5,000,000; measured by pump displacement.

KIMMELTON (STONY CREEK TWP.), SOMERSET COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 225

LOCATION

Northern central Somerset County, along Furgeson Branch of Stony Creek; on Baltimore & Ohio R. R.

INDUSTRIES

Operations of Reading Iron Co., Somerset Coal Department.

WATER SUPPLY

Private system of Reading Iron Co.

SOURCE AND COLLECTION

(1) Drilled well, 129 feet deep; water pumped through 3-inch line 800 feet to distributing reservoir on hill, by 36,000 gallon Deane deep well pump.

(2) Tributary of Beaver Dam Run; 150,000 gallon reservoir about 2 miles northwest of village. During 3 months of year it is necessary to pump through 6-inch line 950 feet from Beaver Dam Run to this reservoir; 216,000 gallon Aldrich triplex pump electrically operated.

DISTRIBUTION

From (1) by gravity through 3-inch pipe 2,500 feet to street hydrants.

From (2) by gravity to boiler-room at mines Nos. 3 and 4.

CONSUMPTION

Supply to 225 people; 8 street hydrants. Stated average daily consumption 24,000 gallons, 5,000 domestic and 19,500 industrial. No means of measurement.

LATROBE BOROUGH AND VILLAGES (DERRY TWP.), WESTMORELAND COUNTY

LATROBE WATER COMPANY
(National Water Works & Guarantee Co.)

Latrobe: Population 1910 census, 8,777; increase since 1900, 4,163. Estimated 1915 population, 7,700a

Estimated 1915 population West Latrobe, 350; Dorothy, 400; Bradenville, 250; Loyalhanna, 600; McChesneytown, 400; Snydertown, 200

LOCATION

Eastern central Westmoreland County, along east bank of Loyalhanna Creek; on Pennsylvania R. R., Ligonier Valley R. R., West Penn Rys., Westmoreland County Ry. and Latrobe Street Ry. Built-up portion of borough on rolling plateau, at elevation 1,000.

INDUSTRIES

H. C. Frick Coke Co., Latrobe Coal Co., Connellsville Coal and Coke Co., Loyalhanna Coal and Coke Co., Latrobe Steel Co., Latrobe Electric Co., Vanadium Steel Alloy Co.; two brick yards.

WATER SUPPLY

Latrobe Water Co., incoroprated 1883 for Latrobe Borough; owned by National Water Works & Guarantee Co.; purchased property and franchises of Derry Township Water Co., incorporated 1883 for Derry Township.

SOURCE AND COLLECTION

Loyalhanna Creek; intake reservoir, capacity 7,000,000 gallons, at foot of Chestnut Ridge, about 3 miles southeast of borough, at elevation 1,020.

Water flows through three 20-inch pipes 50 feet to intake well at pumping station; pumped through 16-inch force main 0.5 mile to filter plant northwest of pumping station. Pumping equipment two Worthington pumps, capacity 7,000,000 and 3,000,000 gallons daily, and three 150 hp. tubular boilers. Water flows through 2,500,000 gallon settling basin and mechanical filter, six 600,000 gallon units, to 10,000,000 gallon distributing reservoir, elevation 208 feet above pumping station. Water medium hard.

DISTRIBUTION

By gravity through 18-inch main; pressures 60 to 85 pounds. Distributing mains as follows:

Size (inches),	18	16	12	10	8	6	4	Total
Length (miles),	0.7	1.3	2.4	0.2	2.8	9.1	7.4	23.9
Pen cent.,	3	5	10	1	12	38	31	100

Ninety-eight fire hydrants, 4-inch.

CONSUMPTION

	Population supplied	Taps	Meters
Latrobe,	7,700	1,380	51
West Latrobe,	350	125	
Dorothy,	400	40	
Bradenville,	250	50	
Loyalhanna,	600	125	
McChesneytown,	400	75	
Snydertown,	200	50	
Total,	9,900	1,845	51

Average daily consumption 2,500,000 gallons, 40% domestic and 60% industrial; measured by pump displacement; maximum 3,500,000 gallons; industrial consumption 1,500,000 gallons, all metered.

LIGONIER BOROUGH, WESTMORELAND COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,575; increase since 1900, 316. Estimated 1915, 2,000a

LOCATION

Southeastern Westmoreland County, along Loyalhanna Creek; on Ligonier Valley R. R.; terminus of Pittsburgh, Westmoreland & Somerset R. R. Built-up portion on hill between Loyalhanna and its tributary, Mill Creek.

INDUSTRIES

Agriculture; summer resort.

WATER SUPPLY

Municipal works built in 1896 and 1897.

SOURCE AND COLLECTION

Furnace Run, tributary of Loyalhanna Creek, 2 miles south of borough; intake dam above Laughlintown, about 3.5 miles southeast of borough, impounds 368,000 gallons; spillway elevation 1,449; watershed area 3,000 acres. Water soft. A new impounding reservoir proposed, 1,300 feet southeast of present dam.

DISTRIBUTION

By gravity through 10-inch and parallel line 8-inch main 200 feet, reducing to 6-inch 19,365 feet, to 300,000 gallon distributing reservoir near borough line; elevation 1,375; 4.3 miles distributing mains, 2-inch to 6-inch, 76% 4-inch; 28 fire hydrants.

CONSUMPTION

Supply to 1,900 people; 386 taps; 12 industrial metered. Stated daily consumption 80,000 gallons, 50% estimated domestic and 50% metered industrial.

LILLY BOROUGH, CAMBRIA COUNTY

SUMMIT WATER SUPPLY COMPANY
(Pennsylvania Railroad)

Population 1910 census 1,638; increase since 1900, 362. Estimated 1915, 1,700b

LOCATION

Southwestern Cambria County, on Little Conemaugh River, at mouth of Bear Rock Run; on Pennsylvania R. R.

WATER SUPPLY

One of domestic supplies of Summit Water Supply Co., furnishing water to Pennsylvania R. R. (System described under Pennsylvania Railroad.)

Source of supply 300,000 gallon reservoir on Bear Rock Run, through 6-inch gravity main. Stated consumption 125,000 gallons daily. No means of measurement.

LLOYDELL (ADAMS TWP.), CAMBRIA COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 1,000b.

LOCATION

Southeastern Cambria County, along South Fork of Little Conemaugh River; on Pennsylvania R. R.

INDUSTRIES

Mining village of Mountain Coal Co.

WATER SUPPLY

Private system of Mountain Coal Co.

Source of supply South Fork of Little Conemaugh River; intake 0.25 mile south of village; water pumped from 10-inch intake pipe through 8-inch force main to 4,000,000 gallon distributing reservoir, on top of mountain, 1 mile southwest of village; distributed by gravity.

LUCERNE (WHITE TWP.), INDIANA COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 360b.

LOCATION

South central Indiana County, along Yellow Creek; on Buffalo, Rochester & Pittsburgh R. R.

INDUSTRIES

Mining village of Rochester & Pittsburgh Coal & Iron Co.

WATER SUPPLY

Private system of coal and iron company, installed 1907.

SOURCE AND COLLECTION

Yellow Creek; intake just above mine. Two Gordon duplex pumps, raise water through 6-inch and 4-inch force main to two wooden tanks on hillside above mine; 6-inch main continues to four tanks on top of hill above village, capacity of each 30,000 gallons. A drilled well, 185 feet deep, can be used as auxiliary supply.

DISTRIBUTION

By gravity through 8-inch main from upper tanks to houses; continues as 4-inch line to shaft and boiler house.

CONSUMPTION

Supply to 360 people in 60 double houses, through 12 street hydrants. No means of measuring consumption; assuming 10 gallons per capita, would be 3,600 gallons daily, domestic.

LUXOR (HEMPFIELD TWP.), WESTMORELAND COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 700b.

LOCATION

Central Westmoreland County, along Little Crabtree Creek, tributary of Crabtree Creek; near Pennsylvania R. R. and West Penn Rys.

INDUSTRIES

No. 1 plant of Jamison Coal and Coke Co., 340 coke ovens.

WATER SUPPLY

Private system of Jamison Coal & Coke Co.

Source of supply for domestic purposes, drilled well; water pumped to street hydrants; for industrial purposes, Little Crabtree Creek; 110,000,000 gallon reservoir just above village; gravity main to coke ovens. Supply to 700 people in 77 double houses. No means of measuring consumption; assuming 10 gallons per capita, would be 7,000 gallons daily, domestic.

MILLERSTOWN BOROUGH, BUTLER COUNTY

PRIVATE SUPPLY

Population 1910 census 993; increase since 1900, 43. Estimated 1915, 1,300a

LOCATION

Chicora post office and station, eastern Butler County, at headwaters of Big Buffalo Creek; on Baltimore & Ohio R. R. Built-up portion on hilly ground 160 to 170 feet above creek.

INDUSTRIES

In oil producing, bituminous coal mining and agricultural district; boiler works, repair shop, three machine shops and a whip factory.

WATER SUPPLY

Private system of H. A. Leopold, installed 1874.

SOURCE AND COLLECTION

Three drilled wells 160 to 250 feet deep in center of borough; water pumped by 20 hp. air compressor from one well into 2,520 gallon receiving basin, from other into 42,000 gallon basin. Two 126,000 gallon Campbell pumps connected to 40 hp. gas engine pump water through 2-inch lines to two 61,000 gallon tanks on hill just north of center of borough.

DISTRIBUTION

By gravity through 6-inch main 1,000 feet long; pressures 20 to 85 pounds. Separate 6-inch line, owned by borough, from tank to 28 hydrants for fire protection. Nearly 2 miles distributing mains, 2-inch and 4-inch. A 2-inch line supplies 32,000 gallon tank of Baltimore & Ohio R. R.

CONSUMPTION

Supply to 1,000 people; 300 taps. Stated daily consumption 40,000 gallons, 44% domestic and 56% industrial. No means of measurement. Baltimore & Ohio R. R. uses 21,000 gallons daily.

MILLVALE BOROUGH, ALLEGHENY COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 7,861; increase since 1900, 1,125. Estimated 1915, 9,000a

LOCATION

Central Allegheny County, along small tributary at junction with Allegheny River, opposite Pittsburgh; on Pennsylvania R. R., Baltimore & Ohio R. R. and Pittsburgh Rys.

WATER SUPPLY

Municipal works installed in 1893.

SOURCE AND COLLECTION

Allegheny River; timber filter crib intake opposite borough, pool level elevation 710. Pumping station at Forty-third Street bridge contains two pumps, capacity 2,000,000 gallons each, and one 450 hp. return tubular boiler. Water medium hard.

DISTRIBUTION

By pumping direct to system, with connection to 450,000 gallon steel equalizing tank; pressures 65 to 130 pounds; 7 miles distributing mains; 85 fire hydrants, 6-inch.

CONSUMPTION

Supply to 9,000 people; 1,000 domestic and 5 industrial taps. Average daily consumption 1,200,000 gallons, 90% domestic and 10%

industrial; measured by pump displacement. Metered consumption 3,000 gallons daily through 6 domestic meters.

COST AND REVENUE

Total cost of works $85,000; annual operating expenses, $12,000; gross revenue, $20,500.

NANTY GLO (BLACKLICK & JACKSON TWPS.), CAMBRIA COUNTY

CAMBRIA COUNTY WATER SUPPLY COMPANY
(Pennsylvania Coal and Coke Corp.)

PRIVATE SUPPLY

Estimated 1915 population, 1,500b

LOCATION

Central western Cambria County, along South Fork of Black Lick Creek; on Pennsylvania R. R.

INDUSTRIES

Coal mining.

WATER SUPPLY

(7) Cambria County Water Supply Co., operating under charter of Nanty Glo Water Co. (leased), and Senwick Water Co. (leased), both incorporated 1902 for Jackson Township. (For statement of Cambria County Water Supply Co.'s various systems, see Gallitzin, Section No. 6.)

(2) Domestic supply by private system of W. & E. C. Davis, built in 1908.

CAMBRIA COUNTY WATER SUPPLY COMPANY

SOURCE AND COLLECTION

Stewart Run, tributary of South Fork of Black Lick Creek; 100,000 gallon reservoir 1 mile southeast of village; watershed area 10.5 square miles.

Company has condemned dam sites, one on Eavens Run near present dam on Stewart Run, and one on Pergin Run, 0.5 mile south of village. Water soft.

DISTRIBUTION

By gravity through 6-inch main; pressures 12 to 15 pounds. No fire hydrants.

CONSUMPTION

Following mines are supplied:

Mine	Owner	Average daily consumption
Nant-y-Glo No. 14, --------	Nant-y-Glo Coal Mining Co., ----------	5,000 to 12,000 gals.
	Pennsylvania Coal & Coke Corp., -----	No record

PRIVATE SYSTEM OF M. & E. C. DAVIS

SOURCE AND COLLECTION

Small tributary of South Fork of Black Lick Creek; intake dam, forming 20,000 gallon reservoir, 1 mile north of village.

DISTRIBUTION

By gravity through 6-inch main; pressure 75 pounds; 6 fire hydrants.

CONSUMPTION

Supply to about 700 people; 1 industrial and 116 domestic taps. No means of measuring consumption; assuming 20 gallons per capita, would be 14,000 gallons daily.

NATRONA AND BIRDVILLE VILLAGES (HARRISON TWP.), ALLEGHENY COUNTY

NATRONA WATER COMPANY
(Pennsylvania Salt Manufacturing Co.)

Estimated 1915 population of Natrona 5,500, Birdville 1,500

LOCATION

Northeastern Allegheny County, along north bank of Allegheny River, adjacent to and northeast of Brackenridge Borough; on Conemaugh Division of Pennsylvania R. R. and Allegheny Valley Street Ry. Built-up portion of Natrona on flat 25 feet above river, limited by ridge 250 feet high about 0.5 mile from river, on which is Birdville district.

INDUSTRIES

Pennsylvania Salt Manufacturing Co. in Natrona; south of this are Western tool and forge Co., Allegheny Steel Co. and West Penn Steel Co.

WATER SUPPLY

Natrona Water Co., incorporated 1908 for Harrison Township by Pennsylvania Salt Manufacturing Co. (Western portion of Natrona supplied by Allegheny Valley Water Co., under description of Tarentum and Brackenridge boroughs, this section.)

SOURCE AND COLLECTION

(1) Allegheny River; intake and pumping station at salt works in Natrona. Pumping equipment one 3,000,000 gallon Wilson-Snyder pump and two 1,500,000 gallon Wilson-Snyder duplex pumps, the larger at bottom of pump well 25 feet in diameter and 30 feet deep, and other two in similar well; take suction direct from river or from pipe to filter crib in river 30 feet from shore; four boilers combined capacity 610 hp. Auxiliary pumping station used for emergencies arranged like other with two 1,000,000 gallon pumps, supply works and also pump through 10-inch force main to filter plant on south side of salt works. Filter plant consists of settling tank, two mechanical filter units, capacity 500,000 gallons daily, and a 6,400 gallon clear water basin.

(2) Springs on hillside west of Natrona; main collecting reservoirs (capacity 100,000 gallons), receive 2-inch pipe 0.5 mile long from four springs in Potts Hollow, 2-inch pipe from two other springs, 3-inch pipe from four McGuiley springs, 2-inch pipe from Gager's Hollow reservoir (capacity 13,000 gallons), and 2-inch pipe from another tank (capacity 50,000 gallons), just west of village; reported flow of springs 100,000 gallons daily. Water soft.

(3) Springs on hillside near river, east of Birdville. Water flows through 4-inch line 2,000 feet and through 3-inch line 4,450 feet to 10,000 gallon collecting tank; pumped through 4-inch force main to 10,000 gallon distributing tank elevated 50 feet above ground; reported flow of springs 25,000 gallons daily. Water soft.

DISTRIBUTION

From (1) by pumping to Natrona district.

From (2) by gravity through 3-inch and 2-inch lines to Natrona district.

From (3) by gravity to Birdville district.

All houses in Natrona district supplied with spring water for drinking and cooking; filtered river water for general purposes; pressures

100 to 120 pounds; 42 fire hydrants, 4-inch, 32 in Natrona and 10 in Birdville. Distributing mains as follows:

	Natrona District		Birdville District		Total length (miles)
	Spring (miles)	Filtered (miles)	Spring (miles)	Filtered (miles)	
2-inch,	5.0	0.3	5.1		10.4
4-inch,		2.8	0.3	0.8	3.9
6-inch,		1.9			1.9
Total,	5.0	5.0	5.4	0.8	16.2

CONSUMPTION

	Population supplied	Taps	Average daily consumption (assuming 30 gals. per capita)
Natrona district,	5,500	1,876	165,000
Birdville district,	1,500	344	45,000
Total,	7,000	2,210	210,000

All domestic. No means of measuring. Supplies drinking water at salt works and West Penn Steel Company.

INDUSTRIAL

Each industry has private system obtaining industrial supply from river.

NEW FLORENCE BOROUGH, WESTMORELAND COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 717; increase since 1900, 83. Estimated 1915, 750a

LOCATION

Northeastern Westmoreland County, along south bank of Conemaugh River; on Pennsylvania R. R.

WATER SUPPLY

Municipal works purchased in 1910 from New Florence Water Co., incorporated 1902 for New Florence Borough.

SOURCE AND COLLECTION

Baldwin Run, tributary of Conemaugh River, in borough; intake reservoir, capacity 1,000,000 gallons, about 1 mile south of borough.

DISTRIBUTION

By gravity through 12-inch main, reduced to 8, 6 and 4-inch.

CONSUMPTION

Supply to 725 people; 300 taps. Stated average daily consumption 40,000 gallons, 3% industrial. No means of measurement.

NEW KENSINGTON, ARNOLD, AND PARNASSUS BOROUGHS, WESTMORELAND COUNTY

KENSINGTON WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
New Kensington,	7,707	3,042	8,923
Arnold,	1,818	392	1,974
Parnassus,	2,578	787	2,824

LOCATION

Adjoining boroughs in northwestern Westmoreland County, along east bank of Allegheny River; on Northern Division of Pennsylvania R. R. and Allegheny Valley Street Ry. Built-up portion on shelf back from river front, having gradual grade to slope of hills; river pooled by Springdale Government dam, just below boroughs.

INDUSTRIES

Aluminum plant, sheet and tin plate plant, glass works, lead and oil plant, window glass plant, reduction plant, Union spring and manufacturing Co. and brewery.

WATER SUPPLY

Kensington Water Co., incorporated 1897 from Burrell Water Co., incorporated 1890 for Lower Burrell Township, which company purchased property and franchises of Parnassus Water Co., incorporated 1890 for Parnassus Borough; New Kensington and Arnold boroughs incorporated from township since that date; works built 1892.

SOURCE AND COLLECTION

Allegheny River; intake, pumping station and filter plant several hundred feet north of Arnold borough line; two large filter cribs in river with gravity lines to pump well. One 4,000,000 gallon triplex pump, with 2,000,000 gallon Snow in reserve, lifts water through 20-inch force main to 500,000 gallon settling basin north of pumping station; water flows through six 500,000 gallon mechanical filter units, on south side of pumping station, to 100,000 gallon clear water basin. A 3,000,000 gallon Nordberg pump, with 3,000,000 gallon Epping-Carpenter triplex in reserve, pumps through 16-inch and 8-inch force mains south 2,000 feet to Moore Street, in Arnold, connecting with two 12-inch mains of distributing system. Water medium hard.

DISTRIBUTION

By pumping directly into system to two 12-inch mains, one continuing south through center of boroughs and other east, with 12-inch branch along eastern boundary of boroughs and connection to 10,000,000 gallon equalizing reservoir on hilltop north of Arnold, 2,000 feet east of pumping station; pressures 25 to 150 pounds. Distributing mains as follows:

Size (inches),	16	12	8	6	4	2 and smaller	Total
Length (miles),	0.6	3.6	2.6	9.0	5.7	3.4	24.9
Per cent.,	2	14	11	36	23	14	100

Fire hydrants: Arnold, 27 owned by borough; New Kensington, 57 owned by borough, 23 private; Parnassus, 48, owned by borough.

CONSUMPTION

Supply to 13,721 people; 2,782 taps, 2,383 metered. Average daily consumption 2,287,630 gallons, 70% domestic and 30% industrial; measured by pump displacement. Metered industrial consumption 686,644 gallons; 21 taps.

INDUSTRIAL

Two plants of American Sheet and Tin Plate Co., National Lead and Oil Co. and American Window Glass Co. have private supplies for industrial purposes, using Allegheny River. Union Spring

and Manufacturing Co. pumps from Allegheny River. Average consumption 150,000 gallons daily, used for hydraulic power, coaling, oil and boiler feed. About 10% of water returned to stream without material increase in temperature.

OAKMONT AND VERONA BOROUGHS, NORTH BESSEMER VILLAGE (PENN TWP.), UNITY VILLAGE (PLUM TWP.), ALLEGHENY COUNTY

SUBURBAN WATER COMPANY OF ALLEGHENY COUNTY, PA.

	Population 1910 census	Increase since 1900	Estimated 1915
Oakmont,	3,436	1,113	4,000
Verona,	2,849	945	3,200
North Bessemer and Unity,			800

LOCATION

Adjoining boroughs in eastern Allegheny County, along east bank of Allegheny River, at mouth of Plum Creek; on Conemaugh & Allegheny Divisions of Pennsylvania R. R. and Pittsburgh Rys. North Bessemer and Unity 3 miles southeast of boroughs on Bessemer & Lake Erie R. R.

INDUSTRIES

Suburban residential and manufacturing district; valves and steam fittings manufacturing plant, structural works and galvanizing shop.

WATER SUPPLY

Suburban Water Co. of Allegheny County, Pa., incorporated 1887 for Verona Borough; leases Moore Water Co., incorporated 1900 for Plum Township, and Unity Water Co., incorporated 1900 for Penn Township; plant completed 1894.

SOURCE AND COLLECTION

Allegheny River, intake, pumping station and filter plant at upper end of Oakmont; two filter cribs with 12-inch line 270 feet long, 18-inch line 250 feet long, 18-inch raw water intake 60 feet long. Two

2,500,000 gallon turbine-driven centrifugal pumps lift water to two 200,000 gallon coagulating basins; flows through four 500,000 gallon mechanical filter units to 200,000 gallon clear water basin. A 2,500,000 gallon turbine-driven pump, with 2,225,000 gallon pump in reserve, forces water through 16-inch and 12-inch mains direct to system; one 400 hp. and one 150 hp. fire tube boilers. Water soft.

DISTRIBUTION

By pumping direct to system with connection to 1,500,000 gallon equalizing reservoir on hill 1 mile east of Verona. Gravity 8-inch and 10-inch main to Unity and North Bessemer, where booster pumping station lifts water to 1,000,000 gallon reservoir; pressures 40 to 160 pounds. Distributing mains as follows:

Size (inches),	16	12	10	8	6	4	2	Total
Length (miles),	0.05	2.60	1.04	6.61	1.85	4.65	3.52	20.32
Per cent.,		13	5	33	9	23	17	100

Sixty-six fire hydrants, 5-inch.

CONSUMPTION

Supply to 8,000 people; 1,500 taps, 760 metered, 22 industrial; metered consumption 800,000 gallons industrial and 96,000 gallons domestic daily. Total average daily consumption 1,475,000 gallons, 46½% domestic and 53½% industrial; measured by pump displacement, Venturi meter being installed.

INDUSTRIAL

Best Manufacturing Co. and Verona Steel Casting Co. have private systems.

PENNSYLVANIA RAILROAD

SUMMIT WATER SUPPLY COMPANY
HIGH RIDGE WATER SUPPLY COMPANY

LOCATION

Main line Pennsylvania R. R. traverses section in east and west direction from the summit of Gallitzin tunnel, elevation 2,125, along Little Conemaugh River, through Cambria and Westmoreland coun-

ties to Blairsville Intersection, 50.5 miles west of summit, at elevation 1,112.2; swings to southeast, following McGee Run, and crosses divide to Monongahela Sub-basin at elevation 1,207.7.

WATER SUPPLY

Main line from Philadelphia to Pittsburgh receives principal supply from eight incorporated water companies, each a separate system. Charters for some of these companies were obtained and works built by American Pipe Manufacturing Co. of Philadelphia. (Complete description included under Pennsylvania Railroad, Section No. 12.) Description of each of these systems given in section in which source of supply is located.

Supply between Gallitzin and Conemaugh by Summit Water Supply Co., name changed in 1905 from Mountain Springs Water Co., incorporated 1899 for Lilly Borough, Cambria County. Since 1905 this company has purchased property and franchises of following companies, all of whose territory lies in Cambria County:

Name	Inc.	Incorporated for
Adams Water Co.,	1902	Adams Twp.
Allegheny Mountain Water Co.,	1900	Lilly Borough, Washington and Gallitzin Twps.
Beaverdale Water Co.,	1904	Summerhill Twp.
Cassandra Water Co.,	1905	Washington Twp.
Croyle Water Supply Co.,	1905	Croyle Twp.
Dawson Water Supply Co.,	1904	Gallitzin Twp.
Dean Water Supply Co.,	1904	Dean Twp.
Industrial Water Supply Co.,	1905	Adams Twp.
Luckett Water Supply Co.,	1905	Cresson Twp.
Mountain Crest Water Co.,	1904	Cesson Twp.
Munster Water Supply Co.,	1905	Washington Twp.
Onnalinda Water Co.,	1901	Summerhill Twp., town of Onnalinda
Otter Water Supply Co.,	1905	Adams Twp.
Sonman Water Supply Co.,	1905	Portage Twp.
Summerhill Water Supply Co.,	1905	Summerhill Twp.

Supply west of Johnstown by High Ridge Water Supply Co., incorporated 1905 for St. Clair Township, Westmoreland County; purchased in 1905 property and franchises of Connellsville Water Co., incorporated 1905 for Connellsville Township, Fayette County, and in 1907 Quarry Water Co., incorporated 1901 for St. Clair Township, Westmoreland County.

SUMMIT WATER SUPPLY COMPANY

SOURCE AND COLLECTION

(1) Bear Rock Run, tributary of Little Conemaugh River at Lilly; 30,000,000 gallon and 8,803,000 gallon storage reservoirs near headwaters, at elevations 2,400 and 2,344 feet; 1 mile lower down is 300,000 gallon intake reservoir.

(2) South Fork of Little Conemaugh River, in Adams Township, Cambria County; 207,000,000 gallon storage reservoir near headwaters, at elevation 2,387, receives flow from small intake on Beaverdam Run, tributary of South Fork, joining main stream just below dam; elevation 2,342; watershed area 6.8 square miles.

(3) North Branch of Little Conemaugh River, at Portage and Summerhill townships, Cambria County; 1,325,000,000 gallon storage reservoir, 2 miles above Wilmore; watershed area 25 square miles.

DISTRIBUTION

From (1) by gravity through 6-inch line from lower reservoir to Lilly; two upper reservoirs connected by 12-inch line from lower; 12-inch line leads northerly to 490,000 gallon distributing reservoir at Gallitzin.

From (2) by gravity through 16-inch line to mouth of Beaverdam Run; connects with 16-inch line from Beaverdam intake and continues northerly to Lilly, reducing to 12-inch; thence to Cresson and Gallitzin, connecting with 12-inch line from Bear Rock reservoirs; 10-inch line down South Fork of Conemaugh River to South Fork Borough. The 16-inch line feeds two 100,000 gallon distributing tanks, one at Puritan and other near Myra, a 12-inch line through Portage westerly to 5,000,000 gallon distributing reservoir at Wilmore. The 10-inch line feeds 100,000 gallon distributing tank near Allendale and 735,000 gallon tank at South Fork.

From (3) by gravity through 24-inch line southwesterly to Wilmore and South Fork; 4,300,000 gallon distributing reservoir at Conemaugh.

CONSUMPTION

Industrial daily supply, in estimated gallons to following places: *Cresson, 263,500; †Conemaugh, 1,000,000; Gallitzin, 830,000; Lilly, 20,000; Portage and Wilmore (4 troughs), 2,304,000; South Fork, 476,033; Bens Creek Branch, 20,000; Old Portage, 25,000; Lovett, 75,000.

HIGH RIDGE WATER SUPPLY COMPANY

SOURCE AND COLLECTION

(1) Big Springs run, tributary of Conemaugh River, in St. Clair Township, Westmoreland County; 46,640,000 gallon storage reservoir 1.5 miles above mouth, at elevation 1,380.

(2) Little Sugar Run, tributary of Conemaugh River, St. Clair Township, Westmoreland County; 138,700,000 gallon storage reser-

*Part of consumption can be furnished by wells.
†Part of consumption can be furnished from Conemaugh River pumping station.

voir 2 miles above mouth, at elevation 1,612, and 4,500,000 gallon reservoir 0.5 mile below other, at elevation 1,330.

(3) Tub Mill Creek, tributary to Conemaugh River, at Bolivar, in Fairfield Township, Westmoreland County; 201,600,000 gallon storage reservoir, 6 miles above mouth, at elevation 1,326.5.

DISTRIBUTION

From (1) by gravity through 20-inch line, connecting with 20-inch line from Little Sugar Creek Run reservoir just below lower dam.

From (2) by gravity through 20-inch line from lower reservoir down Little Sugar Run to railroad, which it parallels east and west. Eastern line ends between New Florence and Seward, St. Clair Township; western at Latrobe, Derry Township. Supplies 2,470,000 gallon distributing reservoir at Blairsville Intersection and 1,000,000 gallon reservoir near Hillside. Booster pumping station at Hillside reservoir used by railroad company. From Blairsville Intersection line reduces to 16-inch, supplying 5,000,000 gallon distributing reservoir near Derry, 5 miles east of Latrobe, 2,000,000 gallon distributing reservoir at Latrobe and track tanks east of Latrobe and Saxmans.

From (3) by gravity through 24-inch line, joining 20-inch line from Little Sugar Run reservoir, near Lacolle, and supplying 4,300,000 gallon distributing reservoir at that place.

CONSUMPTION

Daily supply in gallons (estimated), industrial, to following places: New Florence, 433,833, Hillside, 43,200, Derry, 310,766, *Saxmans (4 troughs), 1,235,599; †Blairsville, Brown Street yard office and enginehouse, 190,000.

PITTSBURGH CITY, ALLEGHENY COUNTY

MUNICIPAL WATER WORKS

Population 1910 census 533,905; increase since 1900, 74,850. Estimated 1915, 571,984

LOCATION

Central Allegheny County, at confluence of Allegheny and Monongahela rivers, forming Ohio River, and dividing city into three parts. Old Pittsburgh, South Side and North Side connected by 14 highway

*Part of consumption as given furnished by Latrobe Water Co.
†Part of consumption as given furnished by Blairsville Water Co.

and 6 railroad bridges across Allegheny and Monongahela rivers. Railroads: Pennsylvania, Pennsylvania Lines West of Pittsburgh, Baltimore & Ohio, Pittsburgh & Lake Erie, Bessemer & Lake Erie over connecting railways, Wabash, Pittsburgh Terminal Ry., Pittsburgh Rys. and Pittsburgh, Harmony, Butler & New Castle Ry. Principal business section between Allegheny and Monongahela rivers, at their junction, and practically level; residential districts hilly; range of elevations 660 feet. Portions of city adjacent to rivers flat and low and subject to floods.

INDUSTRIES

As commercial and industrial center, ranks second in State and fifth in United States. Foremost city as shipping point for coal and coke and production of iron and steel. Leading industries: Manufacture of wire, structural steel, machinery, stoves, engines, sanitary goods, armor plate, air brakes, glassware, cork goods, cigars, several large pickling and preserving plants.

WATER SUPPLY

Municipal system; original works built 1820; consolidation 1914 of North Side and Old City systems. Filtered water now supplied to whole city from one source.

Prior to 1909 municipal plant supplied filtered water from intake on Allegheny River, at Aspinwall to Old Pittsburgh, that part of city between Allegheny and Monongahela rivers. South side was supplied principally by Monongahela Water Co. Allegheny City, now the North Side of Pittsburgh, was supplied with unfiltered water by its municipal plant from intake in Allegheny River, at Montrose, 2 miles above the Aspinwall intake.

Since 1909 Pittsburgh has purchased property of Monongahela Water Co. and annexed the city of Allegheny. A new pumping station at Aspinwall, near filter plant, now supplies North Side with filtered water, while Brilliant pumping station, on south bank of Allegheny River, opposite filter plant, supplies Old Pittsburgh and South Side, the latter being connected by lines across Monongahela River from Old Pittsburgh. This consolidation eliminated two intakes, six pumping stations and two high service districts.

Entire city, except two small portions supplied by Pennsylvania and South Pittsburgh Water Companies, now supplied from one intake in Allegheny River, at Aspinwall, and the filter plant nearby. North Side supplied from Aspinwall pumping station taking water from the filter plant and delivering it to new distributing reservoir on Cabbage Hill, in that district. Old Pittsburgh and South Side supplied from Brilliant pumping station, taking water also from filter

plant and delivering to two Highland distributing reservoirs, Nos. 1 and 2, in Old Pittsburgh. In the various sections of the city four secondary pumping stations supply seven high service districts and another pumps to a higher service.

Each part of city is described separately under Old Pittsburgh, South Side and North Side.

SOURCE AND COLLECTION

Allegheny River; at Aspinwall, 7 miles northeast of center of city; watershed area 11,400 square miles. Intake is concrete bulkhead with eight, gated, 48-inch intake pipes connected through four screen chambers to 124-inch concrete suction conduit extending to Ross pumping station, on north bank of river. Slackwater elevation of river pool 721; 10 feet higher than top of intake.

Ross pumping station delivers water through 96-inch steel, concrete covered, force main 2,600 feet to sedimentation basin at filter plant. Pumping equipment as follows:

Number and type	Date of manufacture	Rated capacity (each)	Pipe connection	
			Suction (inches)	Discharge (inches)
Three Allis-Chalmers vertical compound direct-connected centrifugal pumps,	1906	35 m.g.d.	28	28
One Allis-Chalmers vertical compound gear-driven centrifugal pump,	1913	50 m.g.d.	36	36
One De Laval turbine centrifugal pump, geared,	1913	100 m.g.d.	48	48
Two D'Auria horizontal tandem compound direct double acting duplex pumps,	1906	5 m.g.d.	18	18
One D'Auria horizontal tandem compound direct double acting duplex pump,	1906	3 m.g.d.	18	18
Eight Aultman and Taylor water tube boilers,	1906	350 hp.	----------	----------
Two Babcock and Wilcox water tube boilers	1912	350 hp.	----------	----------

The D'Auria pumps are used for fire and sand washing purposes.

Filter plant, built 1907, area 120 acres, 3,700 feet river frontage. Three settling basins; middle basin, capacity 12,000,000 gallons, receiving; others 51,000,000 gallons capacity each; elevation flow line 768.5. Water flows through 24 units of contact baffles in each basin on entering large settling basins, thence passes through 56 covered slow sand filter units, area 1 acre each, total capacity 200,000,000 gallons daily. Filtered water collected and flows through 124-inch reinforced concrete conduit to 50,000,000 gallon covered filtered water reservoir, elevation flow line 751.5.

OLD PITTSBURGH AND SOUTH SIDE

From filtered water reservoir water flows through two 72-inch riveted steel pipes, 1,300 feet, laid in concrete below Allegheny River bed, to equalizing chamber on south side of river, whence it flows

into suction trunk of Brilliant pumping station. Water then pumped through two 50-inch force mains 3,650 feet to Highland reservoir No. 1, southwest of pumping station, and through one 60-inch force main, 2,000 feet, reducing to 48-inch 4,000 feet to Highland reservoir No. 2, about 1,000 feet west of No. 1.

Reservoir	When built	Elevation of water	Capacity (gallons)
Highland No. 1,	1874	1,064.5	117,000,000
Highland No. 2,	1902	973.0	125,000,000

Pumping equipment at Brilliant pumping station as follows:

Number and type	Date of manufacture	Rated capacity (each)	Pipe connection	
			Suction (inches)	Discharge (inches)
One Holly vertical compound crank and fly wheel double acting pumping engine,	1894	10 m.g.d.	30	30
Four Allis-Chalmers vertical compound crank and fly wheel single acting pumping engines,	1896	12 m.g.d.	30	30
Two Allis-Chalmers vertical compound crank and fly wheel single acting pumping engines,	1904	15 m.g.d.	36	30
Two Allis-Chalmers vertical compound crank and fly wheel single acting pumping engines,	1907	15 m.g.d.	36	30
One Allis-Chalmers vertical triple expansion crank and fly wheel single acting pumping engine,	1910	8 m.g.d.	30	30
Ten Riter-Conley and McNeill horizontal return tubular boilers,	1893	123 hp.		
Ten Riter-Conley and McNeill horizontal return tubular boilers,	1894	125 hp.		
Ten Riter-Conley and McNeill horizontal return tubular boilers,	1895	125 hp.		
Four Riter-Conley and McNeill horizontal return tubular boilers,	1895	155 hp.		
Three Aultman and Taylor water tube boilers,	1906	500 hp.		

OLD PITTSBURGH

Old Pittsburgh between Allegheny and Monongahela rivers, part being in Monongahela Sub-basin, Section No. 19.

Municipal system, except small area along eastern limits, formerly Brushton Village, supplied by Pennsylvania Water Co., described in this section under Wilkinsburg.

DISTRIBUTION

Six services, one low, one intermediate and four high services, all supplied by gravity; elevations 700 to 1,260.

Low service comprises area at junction of rivers including principal business section and narrow strips along east bank of Allegheny and north bank of Monongahela rivers; elevations 720 to 820. Supplied by 36-inch and 50¼-inch main from Highland reservoir, No. 2 northerly a short distance to Allegheny River, where they are cross-

connected and continue as a 42½-inch and a 36-inch parallel to and near bank of river about 6 miles; also cross-connected to low service mains of North Side by 48-inch main under Allegheny River. Another 50-inch from reservoir southerly and directly away from the Allegheny to the Monongahela River, where it divides into a 36-inch southwesterly across river to South Side, and a 24-inch, reducing to 20-inch, southeasterly parallel to and near north bank of Monongahela River, 1.75 miles through Hazelwood to Glenwood.

Intermediate service comprises about 0.33 of area of city in form of a cross, with arms between low and high service districts; elevations 800 to 1,000. Supplied by three 30-inch mains and one 36-inch main from Highland reservoir No. 1; 30-inch mains southerly about 1.5 miles to East Liberty, where a 30-inch and 20-inch lead westerly; a 30-inch, reducing to 24-inch and 20-inch, southerly and westerly, parallel to north bank of Monongahela River; two 20-inch easterly about 1 mile. The 36-inch main leads easterly to city boundary, 2 miles distant, where it returns for about 1 mile as a 20-inch loop line.

Herron Hill high service comprises about 0.25 area of city, principally residential, divided into two connected areas surrounding Herron and Squirrel hills, between which is a narrow area traversed by intermediate service; elevations 980 to 1,200. Herron Hill pumping station, at Centre Avenue and Dithridge Street, takes water under 30 pounds pressure from 30-inch main direct from Highland reservoir No. 1, with emergency connection to 20-inch main of intermediate service. Water pumped through a 24-inch and a 20-inch force main 1,800 feet northwest to Herron Hill reservoir, capacity 8,000,000 gallons, at elevation 1,256.5. District supplied by gridiron of 6- and 8-inch pipes with 12-inch, 20-inch and 24-inch mains from reservoir, 1.75 miles easterly to Squirrel Hill, and two 12-inch mains westerly to Herron Hill District. Pumping equipment consists of:

Number and type	Date of manufacture	Rated capacity (each)	Pipe connection	
			Suction (inches)	Discharge (inches)
Two Allis vertical triple expansion crank and flywheel single acting pumping engine,	1896	5 m.g.d.	24	20
One Allis-Chalmers vertical triple expansion crank and flywheel single acting pumping engine,	1903	6 m.g.d.	20	20
One Wilson-Snyder vertical triple expansion crank and flywheel single acting pumping engine,	1913	6 m.g.d.	24	20
Two Edge Moor water tube boilers,	1897	200 b.hp.		
One Heine water tube boiler,	1906	200 b.hp.		

Belford high service comprises small area directly east of principal business district; elevations 820 to 1,060. Supplied by 12- and 20-

inch mains from Bedford reservoir, on Bedford Avenue, near Leddie Street, capacity 2,500,000 gallons; elevation 1,094.5. This reservoir supplied by 20-inch force main 10,100 feet from Herron Hill pumping station, and can be supplied by 12-inch main from Herron Hill reservoir.

Garfield high service comprises two residential areas, one south and other southwest of Highland reservoirs; elevations 850 to 1,180. Garfield pumping station, Pacific Avenue and Dearborn Street, takes suction from well fed by 12-inch intermediate service main under 30 pounds pressure. Water pumped through 12-inch force main northeast 2,400 feet to two Garfield tanks, capacity of each 225,000 gallons, elevation 1,208.5.

Pumping equipment:

Number and type	Date of manufacture	Rated capacity (each)	Pipe connection	
			Suction (inches)	Discharge (inches)
Two Wilson-Snyder horizontal tandem compound direct double acting duplex pumps,	1896	1½ m.g.d.	12	9
One McNeill horizontal flue boiler,	1893	100 b.hp.		
One Erie City horizontal return tubular boiler,	1899	100 b.hp.		

District supplied by 12-inch main extending northerly from tanks and branching; one 12-inch north and west to small residential area north of Allegheny cemetery; other east to area south of Highland reservoirs. Early in 1915 this district will be consolidated with Herron Hill district and served by 16-inch main from Herron Hill reservoir, thus eliminating Garfield pumping station.

Lincoln high service comprises small residential area in extreme northeastern portion of city; elevations 940 to 1,240. Lincoln pumping station, Park Avenue and Deane Street, takes suction from well fed by 12-inch intermediate service main. Water pumped through single force main, 2,500 feet of 8-inch and 2,900 feet of 12-inch, easterly to Lincoln tank, capacity 225,000 gallons; elevation 1,270. District supplied by 8-inch main from tank. Pumping equipment:

Number and type	Date of manufacture	Rated capacity	Pipe connection	
			Suction (inches)	Discharge (inches)
One Snow horizontal tandem compound direct double acting duplex pump,	1905	1 m.g.d.	8	6
One Wilson-Snyder horizontal tandem compound direct double acting duplex pump,	1912	1 m.g.d.	8	6
One Reeves horizontal return tubular boiler,	1896	75 b.hp.		
One Erie City horizontal return tubular boiler,	1901	75 b.hp.		

Pressures as follows:

Service	Pressure, pounds per square inch		
	Average	Maximum	Minimum
Low rate,	78	97	22
Intermediate,	54	147	3
Herron Hill high,	70	155	11
Bedford high,	64	125	15
Garfield high,	66	125	20
Lincoln high,	86	139	10

Distributing mains and hydrants (exclusive of force mains):

Diameter (inches)	Length (miles)	Per cent. of total	Diameter (inches)	Length (miles)	Per cent. of total
1½,	0.23	.05	20,	20.01	4.32
2,	1.78	.39	24,	3.93	0.85
3,	0.62	.14	30,	13.09	2.83
4,	62.21	13.44	36,	11.86	2.56
6,	239.11	51.67	42½,	4.49	0.97
8,	47.21	10.20	48,	0.23	0.05
10,	8.27	1.79	50¼,	5.41	1.17
12,	32.69	7.06	60,	0.09	0.02
14,	0.74	0.16	66,	0.32	0.07
15,	7.83	1.69			
16,	2.54	0.55			
18,	0.10	0.02	Total,	462.76	100.00

There are 3,925 fire hydrants.

CONSUMPTION

Supply to 298,125 people; 47,975 taps; 6,960 meters. Average daily consumption 70,357,500 gallons.

SOUTH SIDE

Includes that part of city south of Monongahela and Ohio rivers; and therefore in Monongahela and Ohio Sub-basins, Sections 19 and 20.

Municipal system supplies greater part of district along river banks and some distance back from them.

South Pittsburgh Water Co. supplies district south and west of municipal system in old thirty-fifth, thirty-sixth, thirty-eighth and fortieth wards, now part of new eighteenth, nineteenth and twentieth wards, described in Section 19 under Carnegie.

A 36-inch main under Monongahela River from 50-inch main of Old Pittsburgh low service and two 24-inch mains across Tenth Street Bridge from 30-inch Second Avenue line.

DISTRIBUTION

Two services, low and high, supplied by gravity; elevations 725 to 1,200.

Low service comprises an area along river bank including principal mercantile, manufacturing and some residential districts; elevations 725 to 800. Supplied by 36-inch main from eastern end, reducing to one 18-inch and two 12-inch pipes, and by two 24-inch lines from across river at Tenth Street, extending west, paralleling river bank to include extreme western part, called Esplen.

High service comprises an area south of low service, mostly residential and sparsely built-up; elevations 800 to 1,250. The new Mission Street pumping station, completed in 1912, and replacing two other stations, takes water from 30-inch main of low service. Water pumped through 30-inch main 2 miles west to three Allentown tanks, in Grandview Park near McLain Street, capacity of each 845,000 gallons; elevation 1,294.5. Pumping equipment:

Number and type	Date of manufacture	Rated capacity (each)	Pipe connection	
			Suction (inches)	Discharge (inches)
Two Bethlehem Steel vertical triple expansion crank and flywheel single acting pumping engine,	1913	7 m.g.d.	24	24
Two E. Keeler Co. water tube boilers,	1913	325 b.hp.		

District supplied by 20-inch and 12-inch mains westerly and 10-inch and 12-inch mains easterly. Pressures:

Service	Pressures, pounds per square inch		
	Average	Maximum	Minimum
Low,	50	60	15
High,	58	165	10

Distributing mains and fire hydrants (exclusive of force mains):

Diameter (inches)	Length (miles)	Per cent. of total	Diameter (inches)	Length (miles)	Per cent. of total
2,	3.50	3.48	15,	0.60	0.60
3,	0.07	0.07	16,	0.89	0.88
4,	41.20	40.91	18,	0.76	0.75
6,	24.27	24.10	20,	3.13	3.11
8,	11.32	11.24	24,	0.56	0.56
10,	2.63	2.61	30,	1.31	1.30
12,	10.46	10.33	36,	0.06	0.06
			Total,	100.70	100.

There are 852 fire hydrants.

CONSUMPTION

Supply to 83,935 people; 13,978 taps; 1,835 meters. Average daily consumption 19,808,606 gallons.

NORTH SIDE

North Side of Pittsburgh, formerly Allegheny City, includes that portion of city north of Allegheny and Ohio rivers, western part being in Ohio Sub-basin, Section No. 20.

Supplied by municipal system; filtered water from new pumping station at Aspinwall, put in operation March, 1914.

Pumping station east of filtered water reservoir at Aspinwall having 72-inch suction main, 350 feet to filtered water reservoir. Water pumped through 60-inch force main 20,440 feet westerly to North Side reservoir, on Cabbage Hill, in Shaler Township; capacity 152,000,000 gallons at elevation 973; same as Highland reservoir No. 2, the two being cross-connected by 48-inch main across river, to act as equalizing reservoirs. Pumping equipment:

Number and type	Date of manufacture	Rated capacity (each)	Pipe connection	
			Suction (inches)	Discharge (inches)
Two Snow vertical triple expansion crank and flywheel single acting pumping engines,	1914	20 m.g.d.	42	36
Two Allis-Chalmers triple expansion crank and flywheel single acting pumping engines,	1914	20 m.g.d.	42	36
Six E. Keeler Co. water tube boilers,	1914	275 b.hp.		

DISTRIBUTION

Five services; one low, called "A" district, and four high, known as "B," "C," "D," and "E" districts; elevations 700 to 1,360.

Low service, or "A," district comprises about 0.25 area of North Side including principal mercantile district; elevations 720 to 850. Supplied by 60-inch main from North Side reservoir, extending southerly 18,000 feet to Troy Hill; 30-inch main westerly and then northerly 1 mile to Howard Street pumping station, a 36-inch westerly 1.33 miles through centre of district, reducing to 30-inch, continues 1.5 miles westerly and northerly, a 24-inch reducing and branching into southern portion, and a 20-inch, increasing to 24-inch, 0.5 mile west of reservoir, continuing westerly, then northerly.

"B" district high service comprises an area north of "A" district; elevation 825 to 1,125. Howard Street pumping station, at Howard and Rising Main streets, takes water from low service main through a 30-inch and a 16-inch main. Water pumped through 24-inch force main 1,350 feet west to two "B" tanks, capacity of each 200,000 gal-

lons, at elevation 1,199. District supplied by 24-inch and 16-inch mains. Pumping equipment:

Number and type	Date of manufacture	Rated capacity (each)	Pipe connection	
			Suction (inches)	Discharge (inches)
Two Wilson-Snyder horizontal tandem compound direct double acting duplex pumps,	1893	3 m.g.d.	16	12
One Epping-Carpenter horizontal tandem compound direct double acting duplex pump,	1901	3 m.g.d.	16	14
One Allis-Chalmers vertical triple expansion crank and flywheel single acting pumping engine,	1904	5 m.g.d.	24	20
One William Tod vertical triple expansion crank and flywheel single acting pumping engine,	1908	8 m.g.d.	30	20
One Davis water tube boiler,	1896	250 b.hp.		
Five Brown water tube boilers,	1896	250 b.hp.		

"C" district high service comprises residential area north of "B" service; elevations 800 to 1,200. Water pumped through 24-inch force main 1.650 feet west from Howard Street pumping station to two "C" tanks, capacity 200,000 gallons; elevation 1,279.5. District supplied by 24-inch and 16-inch mains extending 1 mile northerly, a 16-inch continuing 1.25 miles north to Greentree pumping station.

"D" district high service comprises sparsely built-up area east of "C" district, and north of "A" district; elevations 800 to 1,150. Water pumped through 16-inch force main 4,000 feet from Howard Street pumping station to two "D" tanks, about 1,600 feet east of station; capacity of each 200,000 gallons; elevation 1,198. District supplied by 10-inch and 12-inch mains from tanks.

"E" district high service comprises small sparsely built-up area in extreme northern portion; elevations 1,100 to 1,360. Greentree pumping station, on Broadway east of Perrysville Avenue, takes supply from 10- and 12-inch mains from 16-inch "C" district line; water pumped through 12-inch force main 1,800 feet north to two "E" tanks, capacity 200,000 gallons, at elevation 1,388.

Pumping equipment:

Number and type	Date of manufacture	Rated capacity (each)	Pipe connections	
			Suction (inches)	Discharge (inches)
Two Gould single acting triplex pumps,	1904	864,000 m.g.d.	10	8
Two 2,000 volt induction motors,		75 hp.		

Pressures as follows:

District	Average	Maximum	Minimum
"A" low service,	55	90	10
"B" high service,	95	165	10
"C" high service,	110	220	10
"D" high service,	90	170	21
"E" high service,	86	140	20

Distributing mains and hydrants (exclusive of force mains):

Diameter (inches)	Length (miles)	Per cent. of total	Diameter (inches)	Length (miles)	Per cent. of total
2,	0.17	0.12	15,	0.99	0.72
4,	2.49	1.80	16,	9.45	6.82
6,	65.58	47.35	20,	1.00	0.72
8,	23.84	17.21	24,	5.92	4.30
10,	14.32	10.34	30,	2.83	2.04
12,	10.37	7.49	36,	1.51	1.09
			Total,	138.5	100.00

There are 1,949 fire hydrants.

CONSUMPTION

Supply to 139,090 people; 25 317 taps; 1,940 meters. Average daily consumption 35,885,000 gallons.

SUMMARY

	Old Pittsburgh	South Side	North Side	Total
Population supplied,	298,125	83,935	139,090	521,150
Number of taps,	47,975	13,978	25,317	87,270
Meters,	6,960	1,835	1,940	10,735
Average daily consumption (million gals.)	70.358	19.809	35.885	126.052
Per capita consumption (gals. daily),	236	236	258	242

Remainder of city about 50,834 people; 12,400 supplied by Pennsylvania Water Co. and rest by South Pittsburgh Water Co. Of total pumpage of 152,000,000 gallons daily from river, about 17% used for washing filters and for condensing purposes.

COST AND REVENUE

Total cost of works, $30,000,000; annual operating expenses, $835,000; levied water rents (1914), $2,202,915.

PORTAGE BOROUGH, MARTINDALE, SPRINGHILL AND TROUT RUN VILLAGES (PORTAGE TWP.), CAMBRIA COUNTY

PORTAGE WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Portage,	2,954	2,138	3,500a
Martindale and Trout Run,			2,500a
Springhill,			300a
Total,			6,300a

LOCATION

Southeastern Cambria County, along Little Conemaugh River, at mouth of Trout Run; villages southeast along Trout Run; on Pennsylvania R. R. Range of elevations in built-up portion 1,600 to 1,800.

INDUSTRIES

Bituminous coal mining.

WATER SUPPLY

Portage Water Co., reorganized 1914 from Martindale Water Co., incorporated 1901 for Portage Borough; works constructed 1906.

SOURCE AND COLLECTION

(1) Trout Run; storage reservoir, capacity 11,240,000 gallons, at Martindale, 3 miles southeast of Portage, at elevation 2,300; watershed area 2 square miles. Intake at Springhill, about 0.75 mile southeast of Martindale, at elevation 1,951. Water soft.

(2) Farren Run, tributary of Trout Run, 1.5 miles south of borough; 250,000 gallon reservoir, about 2 miles south of borough, at elevation 1,930; watershed area 1.25 square miles; dry in summer. Water soft.

DISTRIBUTION

From (1) by gravity from Trout Run reservoir through 336 feet of 10-inch main, reducing to 1.4 miles of 8-inch, reducing to 6-inch for 0.6 mile, where it has gated connection to 10-inch main from Farren Run reservoir; continues as 6-inch, 1.6 miles to Portage; from intake 1.4 miles of 4-inch and 3-inch main to mines.

From (2) by gravity from Farren Run reservoir through 4-inch main 1.1 miles to mines. Pressures 70 to 100 pounds 5.2 miles distributing pipes; 23 fire hydrants, 4-inch.

CONSUMPTION

Supply to 4,535 people; 831 taps. Stated consumption 650,000 gallons, 69% domestic and 31% industrial. No means of measurement.

SALTSBURG BOROUGH, INDIANA COUNTY

MUNICIPAL WATER WORKS

Population 1910 census 1,044; increase since 1900, 216. Estimated 1915, 1,300a.

LOCATION

Southwestern corner Indiana County along north bank Conemaugh River, opposite mouth of Loyalhanna Creek; on Conemaugh Division of Pennsylvania R. R. Built-up portion hilly; range of elevations 125 feet.

INDUSTRIES

Agriculture; glass factory. Kiskiminitas Preparatory School just across river, in Westmoreland County.

WATER SUPPLY

Municipal plant built in 1894.

SOURCE AND COLLECTION

Conemaugh River; intake and puming station at upper end of borough. Two 5-inch intakes to pumping station, where two Laidlaw-Dunn-Gordon duplex pumps, combined capacity 750,000 gallons, pump through 8-inch force main to borough system; 100 hp. tubular boiler. Water medium hard.

DISTRIBUTION

By pumping to system, with connection to 1,000,000 gallon equalizing reservoir about 0.5 mile northeast of borough, on river bluff; pressures 45 to 100 pounds; about 3 miles distributing mains, 4-inch to 8-inch; 22 fire hydrants, 6-inch.

CONSUMPTION

Supply to 1,100 people; 225 taps, 175 metered. Supplies Kisiminitas Preparatory School. Average daily consumption 75,000 gallons, 95% domestic and 5% industrial; measured by pump displacement.

COST AND REVENUE

Total cost of works, $23,712; annual operating expenses about, $1,600; gross revenue about $2,500.

SCALP LEVEL BOROUGH, CAMBRIA COUNTY; PAINT AND WINDBER BOROUGHS, SEANOR AND BERWINDO VILLAGES (PAINT TWP.), SOMERSET COUNTY

WINDBER WATER & POWER COMPANY

(Berwind-White Coal Mining Company)

	Population 1910 census	Increase since 1900	Estimated 1915
Windber,	8,013	(Inc. 1900)	8,000b
Scalp Level,	1,424	450	1,600b
Paint,	999	(Inc. 1900)	1,000b

LOCATION

Adjoining boroughs, Scalp Level in southern Cambria County and others in northern Somerset County, along Paint Creek; on Pennsylvania R. R. and Johnstown Traction line; Seanor 4 miles southwest of boroughs, in Paint Township.

INDUSTRIES

Twelve mines of Berwind-White Coal Mining Co. in Paint and Shade Creek valleys.

WATER SUPPLY

Windber Water & Power Co., subsidiary of Berwind-White Coal Mining Co.; incorporated 1900 for Paint and Shade townships, Somerset County. The coal mining company also holds Paint Township Water Co., incorporated 1897 for Scalp Level, Somerset County, and

Richland Township Water Co., incorporated 1897 for Richland Township, Cambria County, by which a supply is furnished to those districts.

SOURCE AND COLLECTION

(1) Clear Shade Creek, tributary of Shade Creek, 6 miles south of Windber; dam 2 miles above junction with Dark Shade Creek impounds 6,000,000 gallons; watershed area 19.4 square miles.

(2) Shade Creek, tributary of Stony Creek at Seanor; intake just above mouth with 8-inch intake pipe to Worthington turbine driven pump, which raises water through 6-inch force main to two 32,000 gallon wooden tanks on hillside at Seanor; watershed area 80 square miles. Water treated with hypochlorite at tanks.

(3) Little Paint Creek, tributary of Paint Creek, at Scalp Level Borough; Elton reservoir, capacity 4,000,000 gallons, 2 miles northeast of borough; watershed area 16 square miles. Water treated with hypochlorite at reservoir.

DISTRIBUTION

From (1) by gravity through 24-inch pipe 22,000 feet reduced to 22-inch for 6,000 feet; 18-inch for 3,000 feet; 16-inch for 1,600 feet and 20-inch for 9,000 feet; all wood stave pipe to borough line.

From (2) by gravity through 6-inch main up valley and 4-inch main to Seanor.

From (3) by gravity through 8-inch main.

CONSUMPTION

Supply to 7,000 people; 1,400 taps. Stated average daily consumption 3,000,000 gallons. No means of measurement.

SHARPSBURG BOROUGH, ALLEGHENY COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 8,153; increase since 1900, 1,311. Estimated 1915, 8,843x

LOCATION

Central Allegheny County, along north bank of Allegheny River, opposite Hiland Park, Pittsburgh City; on Pennsylvania R. R. and

Baltimore & Ohio R. R.; at junction of Pittsburgh & Butler Street Ry. and Pittsburgh Rys.

INDUSTRIES

Residential suburb of Pittsburgh; brewery.

WATER SUPPLY

Municipal works built in 1886.

SOURCE AND COLLECTION

Drilled wells, averaging 56 feet deep, about 150 feet from river in borough. River water filters through sand and gravel to wells; pumped through 14-inch main to distributing system. Pumping equipment two 1,500,000 gallon pumps, two 150 hp. Heine and two 300 hp. Geary water tube boilers. Water medium hard.

DISTRIBUTION

By pumping to system, with automatic regulation and no reservoirs; pressure 75 to 85 pounds, can be increased to 140 pounds for fire purposes; 76 fire hydrants, 4-inch and 6-inch.

CONSUMPTION

Supply to 10,000 people; 2,050 taps. Average daily consumption 1,200,000 gallons, 360,000 industrial; measured by pump displacement.

INDUSTRIAL

Fort Pitt Brewing Co. has private system for industrial supply.

SONMAN, BENS CREEK AND SHOEMAKER VILLAGES (PORTAGE TWP.), CAMBRIA COUNTY

BENS CREEK WATER COMPANY

Estimated 1915 population: Sonman, 558; Bens Creek, 525; Shoemaker, 138.

LOCATION

Southeastern Cambria County; Bens Creek and Shoemaker along Conemaugh River, and Sonman south of Bens Creek, on Sonman Run, small tributary of Conemaugh River.

INDUSTRIES

Sonman Shaft Coal Co., Shoemaker Coal Mining Co., Juniata Coal Co., Webster No. 1 mine, and Alexandria Fire Clay Co.

WATER SUPPLY

Bens Creek Water Co., incorporated 1905 for Portage Township.

SOURCE AND COLLECTION

Bens Creek, tributary of Conemaugh River, 1 mile east of village; Ernst Run dam, intake at elevation 2,137, about 3 miles southeast of Sonman and 1 mile above old reservoir of Pennsylvania R. R., 2 miles above mouth of stream; watershed area 4.33 square miles. Water soft.

DISTRIBUTION

By gravity through 10-inch main 1,500 feet, reducing to 8-inch 2,700 feet to point near railroad dam, elevation 2,078, where it divides into 6-inch and a 4-inch with emergency connection to dam. The 4-inch and 6-inch follow valley, 6-inch crossing to Sonman Run, where it serves Shoemaker, elevation 1·830, and Sonman, elevation 1,745; total distance 12,750 feet. The 4-inch continues to Bens Creek, elevation 1,850, a distance of 6,700 feet. Maximum pressure 135 or 165 pounds, depending on which dam is used; over 1 mile 3-inch and smaller distributing mains; 8 fire hydrants.

CONSUMPTION

Supply to 1,200 people; 108 taps. Stated maximum daily consumption 270,000 gallons, 27% domestic and 73% industrial. No means of measurement.

SOUTH FORK BOROUGH, CAMBRIA COUNTY

SOUTH FORK WATER COMPANY

Population 1910 census, 4,592; increase since 1900, 1,957. Estimated 1915, 7,000a.

LOCATION

Central southern Cambria County, at junction of Little Conemaugh and South Fork of Little Conemaugh rivers; on Pennsylvania R. R. and Southern Cambria Ry.; on hillside between two rivers, elevation 1,500.

INDUSTRIES

Eight mines nearby; brewery, foundry, machine works, brick works and lumber mill.

WATER SUPPLY

South Fork Water Co., incorporated 1892 for South Fork Borough.

SOURCE AND COLLECTION

(1) Sandy Run, tributary of South Fork, 1 mile south of borough; two dams, old one 3 miles south of borough, at elevation 160 feet, capacity 13,000,000 gallons; new one about 1 mile above old, at elevation 200 feet above borough, capacity 18,000,000 gallons; watershed area of new reservoir 6.5 square miles; of old about 2 square miles. Water medium hard.

(2) Emergency intake and springs 1 mile below lower Sandy Run dam, just above mouth of Sandy Run; small pump operated by 4 hp. gasoline engine, kept for extreme emergencies.

DISTRIBUTION

By gravity through 1-inch reducing to 8-inch, from Upper Sandy Run reservoir for domestic supply. Industrial supply by 8-inch gravity main from Lower Sandy Run reservoir. Emergency connection between domestic and industrial systems for fire protection. Pressures 5 to 100 pounds; 21 fire hydrants.

CONSUMPTION

Supply to 7,000 people; 550 taps, 95 domestic and 5 industrial, metered. Average daily consumption 2,000,000 gallons, 95% domestic and 5% industrial; measured by Venturi meter. Cause of high consumption under investigation.

SPRINGDALE BOROUGH, ALLEGHENY COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,999; incorporated 1906. Estimated 1915, 2,500.

LOCATION

Northeastern Allegheny County, in large bend of Allegheny River, east of Cheswick borough; on Pennsylvania R. R. and Allegheny

Street Rys. Most of built-up portion on slightly rolling flat land along river; 0.25 mile from river grade rises 200 to 300 feet.

INDUSTRIES

Residential community; plate glass, mirror and glue plants. Government dam opposite upper frontage of borough.

WATER SUPPLY

Municipal water works built 1912; borough purchased works of Springdale Water Co., incorporated 1905 for Springdale Township.

SOURCE AND COLLECTION

(1) Four 6-inch drilled wells, 145 to 210 feet deep; small pumping station over each well contains Meyers deep well pump, belt-connected to 5 hp. Fairbanks gas engine. Water from well No. 1 piped through 3-inch line to receiving tank, capacity 5,532 gallons, near main pumping station; wells Nos. 3, 4 and 5 by 3-inch line to receiving tank. Pumping equipment 144,000 gallon Gould triplex pump with 3-inch suction, belt-connected to 10 hp. Fairbanks gas engine, and 648,000 gallon Gould triplex pump with 2-inch suction, belt-connected to 8 hp. Fairbanks gas engine for emergencies. The 3-inch and 2-inch force mains join to form 5-inch line north 1,307 feet to 350,000 gallon distributing reservoir, 233 feet above pumps, 3,200 feet north of borough line and 400 feet above lowest built-up section.

(2) Seven springs on hillside above pumping station, two used, others to be developed later; springs Nos. 1 and 2 piped to concrete basin, near collecting basin for wells.

PROPOSED SOURCE (FOR USE DURING DRY SEASONS)

Tributary of Riddles Run, 1.5 miles above mouth in Allegheny River; intake dam impounding 7,000,000 gallons near mouth of tributary and 700 feet northwest of present pumping station; watershed area 100 acres; 6-inch gravity main to filter plant, consisting of 11,000 gallon settling tank, one 120,000 gallon mechanical filter unit and a 5,000 gallon clear water well.

DISTRIBUTION

By gravity through 5-inch main south 1,320 feet to borough line. Distributing mains 8.5 miles 4-inch and 10-inch; pressures 120 to 155 pounds; 51 fire hydrants 4-inch.

CONSUMPTION

Supply to 1,000 persons; 225 taps. Average daily consumption 22,000 gallons, maximum of 25,000 gallons, all domestic; determined by pump displacement and fall in reservoir.

STARFORD VILLAGE (GREEN TWP.), INDIANA COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 750a.

LOCATION

Eastern central Indiana County, along North Branch of Two Lick Creek; on Cherry Tree & Dixonville R. R.

INDUSTRIES

Bituminous coal mining.

WATER SUPPLY

Private system of S. B. Glassford, R. F. Fleming and C. E. Wassam, built in 1906.

SOURCE AND COLLECTION

Spring rising on hillside on west side of Main Street and 75 feet above, collected into 1,100 gallon reservoir. Water medium hard.

DISTRIBUTION

By gravity through 1½-inch pipe line.

CONSUMPTION

Supply to 20 people through 5 taps; 3 houses of owners and 2 rented houses. Stated average consumption 150 gallons daily, all domestic. No means of measurement.

STOYESTOWN BOROUGH, SOMERSET COUNTY

STOYESTOWN WATER COMPANY

Population 1910 census, 355; increase since 1900, 49. Estimated 1915, 375a

LOCATION

Northern central Somerset County, along Beaver Dam Run, near its mouth in Stony Creek; post office and station, Stoyestown; Baltimore & Ohio R. R. Built-up portion 1 mile west of railroad and several hundred feet higher.

INDUSTRIES

Agriculture; bituminous coal mines in vicinity.

WATER SUPPLY

Stoyestown Water Co., incorporated 1906 for Stoyestown Borough.

SOURCE AND COLLECTION

Three drilled wells, 58, 60 and 348 feet deep, on western edge of borough. Water pumped by windmill with 3 and 5 hp. electric motors as auxiliary to 100,000 gallon reservoir; capacity of pump 50,000 gallons per day.

DISTRIBUTION

By gravity through 6-inch main; pressures 12 to 100 pounds; 0.8 mile distributing mains; no fire hydrants.

CONSUMPTION

Supply to 200 people; 48 taps, 8 metered. Stated daily consumption 10,000 gallons, all domestic. No means of measurement.

SUMMERHILL BOROUGH AND EHRENFELD VILLAGE (CROYLE TWP.), CAMBRIA COUNTY

CAMBRIA COUNTY WATER SUPPLY COMPANY (Pennsylvania Coal & Coke Corporation)

	Population 1910 census	Increase since 1900	Estimated 1915
Summerhill,	863	272	1,000b
Ehrenfeld,			400b

LOCATION

Southern central Cambria County, along Little Conemaugh River; Ehrenfeld about 1 mile below Summerhill; on Pennsylvania and Southern Cambria railroads.

INDUSTRIES

Mining settlements near operations of Pennsylvania Coal & Coke Corporation.

WATER SUPPLY

Cambria County Water Supply Co., operating under charter of Summerhill Borough Water Co. and Croyle Township Water Co. (owned), incorporated 1900 for Summerhill Borough and Croyle, respectively; Forest Water Co. (leased), incorporated 1901 for Croyle Township. (Statement of Cambria County Water Supply Company's systems given under Gallitzin, Section No. 6.)

SOURCE AND COLLECTION

Laurel Run: 4,800,000 gallon reservoir 1 mile north of borough; watershed area 5.5 square miles.

DISTRIBUTION

By gravity through 6-inch main; 4.65 miles distributing mains, 2-inch to 6-inch; 10 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,400 people; 176 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 42,000 gallons daily.

TARENTUM AND BRACKENRIDGE BOROUGHS, CREIGHTON, HITES AND GLASSMERE VILLAGES (EAST DEER TWP.), ALLEGHENY COUNTY

ALLEGHENY VALLEY WATER COMPANY
TARENTUM MUNICIPAL WATER WORKS.

	Population 1910 census	Increase since 1900	Estimated 1915
Tarentum,	7,414	1,942	8,500
Brackenridge,	3,134	(Inc. 1901)	3,500
Villages,	3,452		4,000

LOCATION

Adjoining boroughs in northeastern Allegheny County, along north bank of Allegheny River; villages below on same side of river; on Conemaugh Division of Pennsylvania R. R. and Allegheny Valley Street Ry.

INDUSTRIES

Allegheny Steel, Western Tool and Forge, East Deer Forge, Tarentum Glass, Fidelity Glass, and Flaccus Glass companies; Allegheny Plate Glass, Pittsburgh plate glass Nos. 1 and 2, Tarentum paper mills and McFetridge industries.

WATER SUPPLY

Allegheny Valley Water Co., incorporated 1906 for Cheswick Borough; by purchase of three other companies, territory includes Springdale, Harmar, Harrison and East Deer townships, Tarentum and Brackenridge boroughs. Works built 1886 by Tarentum Water Co., purchased 1906 by Allegheny Valley Water Co.

SOURCE AND COLLECTION

Allegheny River; filter crib intake and pumping station in Brackenridge; water by gravity through 20-inch pipe from filter crib 40-feet to pump well, 32 feet diameter. Pumping equipment one 2,000,000 gallon Wilson-Snyder and one 3,000,000 gallon Epping-Carpenter pump; 20-inch force main, 2,500 feet to filter plant, on summit of ridge in Brackenridge. Filter plant consists of two 500,000 gallon settling tanks, six mechanical filter units, combined capacity 3,000,000 gallons, and 2,000,000 gallon clear water basin.

DISTRIBUTION

By gravity; pressure 90 pounds; 46 fire hydrants.

CONSUMPTION

Supply to 16,000 people; 2,148 taps, 500 metered. Average consumption 1,500,000 gallons daily, 1,250,000 domestic and 250,000 industrial; measured by pump displacement. Supplies small part of Natrona village, just east of Brackenridge and fire protection to industries.

HISTORICAL

Allegheny Valley Water Co. purchased property and franchises of following companies in 1906:

Name	Inc.	Incorporated for
Springdale Twp. Water Co.,	1906	Springdale Township
Harmar Twp. Water Co.,	1906	Harmar Township
Tarentum Water Co.,	1906	Merger
*Tarentum Water Co.,	1887	Tarentum Borough
*East Deer Twp. Water Co.,	1897	East Deer Township
*Harrison Twp. Water Co.,	1887	Harrison Township

*Merger of Tarentum Water Co.

TARENTUM MUNICIPAL SYSTEM

SOURCE AND COLLECTION

Allegheny River; intake crib at foot of Main Street; 14-inch intake pipe to pump well. Water raised by duplicate 500,000 gallon centrifugal pumps, electrically operated, through 1,215 feet of 14-inch pipe to 125,000 gallon sedimentation basin; by gravity, through mechanical gravity filter having two 500,000 gallon units, to 150,000 gallon clear water well; pumped through 12-inch main direct to distributing system. High duty pumping equipment one 500,000 gallon, two stage, turbine-driven centrifugal pump, using exhaust steam from municipal electric light station; in reserve one 500,000 gallon Laidlaw-Dunn-Gordon pump using steam from boilers of electric light station.

DISTRIBUTION

By pumping direct to system, with 500,000 gallon standpipe as equalizer. Pressures 70 to 140 pounds; 68 fire hydrants, 4-inch. Distributing mains as follows:

Size (inches),	12	10	6	4	Total
Length (miles),	2.0	2.0	4.0	4.0	12.0

CONSUMPTION

Supply to 750 taps; 475 meters. Average daily consumption 250,000 gallons, all domestic; measured by gage on clear water well.

TWIN ROCKS (BLACK LICK TWP.), CAMBRIA COUNTY

MARIE WATER COMPANY

Estimated 1915 population, 1,500a

LOCATION

Expedit post office, central western Cambria County, along South Fork of Black Lick Creek; on Cresson Division of Pennsylvania R. R. Range of elevation in built-up portion 1,622 to 1,780.

INDUSTRIES

Operations of Commercial Coal Mining Co. and Big Bend Coal Mining Co.

WATER SUPPLY

Marie Water Co., incorporated 1902 for Black Lick Township; works built in 1906.

SOURCE AND COLLECTION

(1) Spring at headwaters of small stream flowing into Coal Pit Run, tributary of South Fork Black Lick Creek, at village; water collected in 1,500,000 gallon storage reservoir about 1 mile north of village, at elevation 1,769. Seldersville Spring reservoir 0.33 mile west, capacity 25,000 gallons, at elevation 1,832. Water medium hard.

(2) A drilled well, 210 feet deep, on bank of South Fork Black Lick Creek, in village; used in summer when other sources are dry. Pumping equipment a Gould pump, 4-inch suction and 4-inch discharge, and 15 hp. electric motor.

DISTRIBUTION

By gravity through 3-inch pipe 6,600 feet long, joined by 3-inch from Seldersville Reservoir; pressures 13 to 94 pounds; 2,700 feet of 1½-inch and 2-inch distributing mains; no fire hydrants.

CONSUMPTION

Supply to 1,500 people; 92 domestic and 2 industrial taps. Stated daily consumption 17,000 gallons, 15,000 domestic and 2,000 industrial. No means of measurement.

INDUSTRIAL

Big Bend Coal Mining Co. has private system, pumping from drilled well for use of steam plant.

VANDERGRIFT, EAST VANDERGRIFT AND VANDERGRIFT HEIGHTS BOROUGHS, PARK PLAN VILLAGE (ALLEGHENY TWP.), WESTMORELAND COUNTY; NORTH VANDERGRIFT VILLAGE (PARKS TWP.), ARMSTRONG COUNTY

VANDERGRIFT WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Vandergrift,	3,878	1,802	5,300
East Vandergrift,	1,852	(Inc. 1901)	1,528
Vandergrift Heights,	3,438	1,528	3,600
North Vandergrift,			700
Park Plan,			600

LOCATION

Adjoining boroughs in Northwestern Westmoreland County, in large bend of Kiskiminitas River; on Pennsylvania R. R.

INDUSTRIES

Sheet and tin plate mill, engineering and foundry works and box works.

WATER SUPPLY

Vandergrift Water Co., incorporated 1895 for Allegheny Township. Boroughs incorporated from that township.

SOURCE AND COLLECTION

Seventeen drilled wells in valley of Pine Run, 3.5 miles southwest of borough; water raised by air-lift to tank at pumping station; flows through mechanical filters, three units of 1,000,000 gallons total capacity, to 5,000 gallon clear water basin; pumped through 10-inch force main to three 500,000 gallon distributing tanks on hills south of boroughs. Pumping equipment one 800,000 gallon steam pump and a 1,300,000 gallon electrically-driven pump.

Company also holds water rights on Pine Run, 2.5 miles above present pumping station, where three wells have been drilled.

DISTRIBUTION

By gravity through 6-inch, 8-inch and 10-inch mains from tanks.

CONSUMPTION

Population supplied: Vandergrift, 5,360; East Vandergrift, 1,344; Vandergrift Heights, 3,600; North Vandergrift, 650; Park Plan, 600; total 11,194. Taps: Vandergrift, 1,138; East Vandergrift, 192; Vandergrift Heights, 664; North Vandergrift, 130; Park Plan 120; total 2,244.

Average daily consumption 455,500 gallons, 11,000 industrial; measured by pump displacement. Supplies drinking water to American Sheet & Tin Plate Co., United Engineering & Foundry Co., Vandergrift Electric Light and Power Co., Pine Run Coal Co., Pennsylvania R. R. and Vandergrift Box Co.

VERONA AND OAKMONT BOROUGHS, NORTH BESSEMER VILLAGE (PENN TWP.), AND UNITY VILLAGE (PLUM TWP.), ALLEGHENY COUNTY

SUBURBAN WATER COMPANY OF ALLEGHENY COUNTY

	Population 1910 census	Increase since 1900	Estimated 1915
Verona,	2,849	945	3,200a
Oakmont,	3,436	1,113	4,000a
North Bessemer and Unity,			800a
Total,			8,000a

LOCATION

Adjoining boroughs in eastern Allegheny County, along east bank of Allegheny River, at mouth of Plum Creek; on Conemaugh and Allegheny Division, Pennsylvania R. R. and Pittsburgh Rys. North Bessemer and Unity 3 miles southeast of boroughs, on Bessemer & Lake Erie R. R. Topography hilly.

INDUSTRIES

Suburban residential and manufacturing district; valves and steam fittings plant, structural works and galvanizing shop.

WATER SUPPLY

Suburban Water Co. of Allegheny County, Pa., incorporated 1887 for Verona Borough; leases Moore Water Co., incorporated 1900 for Plum Township, and Unity Water Co., incorporated 1900 for Penn Township; plant completed 1894.

SOURCE AND COLLECTION

Allegheny River; intake, pumping station and filter plant at upper end of Oakmont; two filter cribs with 12-inch line 270 feet long and 18-inch line 250 feet long and an 18-inch raw water intake, 60 feet long. Two 2,500,000 gallon turbine-driven centrifugal pumps lift water to two 200,000 gallon coagulating basins, whence it flows through four 500,000 gallon mechanical filter units to 200,000 gallon clear water basin. A 2,500,000 gallon turbine-driven pump, with 2,225,000 gallon pump in reserve, forces water through 16-inch and 12-inch mains direct to system; one 400 hp., and one 150 hp. fire tube boilers. Water soft.

DISTRIBUTION

By pumping direct to system, with connection to 1,500,000 gallon equalizing reservoir on hill 1 mile east of Verona. A gravity 8-inch and 10-inch main to Unity and North Bessemer, where booster pumping station lifts water to 1,000,000 gallon reservoir; pressures 40 to 160 pounds. Distributing mains as follows:

Size (inches),	16	12	10	8	6	4	2	Total
Length (miles),	0.05	2.60	1.04	6.61	1.85	4.65	3.52	20.32
Per cent.,	----------	13	5	33	9	23	17	100

Sixty-six fire hydrants, 5-inch.

CONSUMPTION

Supply to 8,000 people; 1,500 taps, 760 taps are metered, 22 industrial. Metered consumption 800,000 gallons industrial and 96,000 gallons domestic daily. Total average daily consumption 1,475,000 gallons, about 50% domestic; measured at present by pump displacement, Venturi meter being installed.

INDUSTRIAL SUPPLY

Best Manufacturing Co. and Verona Steel Casting Co. have private systems.

VINTONDALE BOROUGH, CAMBRIA COUNTY

BLACK LICK WATER COMPANY AND JACKSON WATER COMPANY

Population 1910 census, 1,410 (incorporated in 1907). Estimated 1915 population, 1,500a

LOCATION

Central western Cambria County, along South Fork of Black Lick Creek, near Indiana County line; on Cresson Division of Pennsylvania R. R. and Southern Cambria Ry. Range of elevation in built-up portion 125 feet.

INDUSTRIES

Bituminous coal mining; coke manufacturing.

WATER SUPPLY

Black Lick Water Co. and Jackson Water Co., incorporated 1900 for Black Lick and Jackson townships respectively; owned and controlled by same stockholders.

SOURCE AND COLLECTION

(1) Jackson Water Co. has sources on Shuman's and Bracken's runs, small tributaries of South Fork of Black Lick Creek from south, just east of village; small reservoirs at elevation 1,630 feet about 1 mile about mouths; watershed area of each 1 square mile. Water soft.

(2) Black Lick Water Co. has source on North Fork of Black Lick Creek; principal supply; intake dam and pumping station at north end of village, elevation 1,375; watershed area 15 square miles. Pumping equipment two 1,200,000 gallon centrifugal pumps, electrically operated.

DISTRIBUTION

From (1) by gravity through 6-inch mains; 4 miles of distributing mains, 4-inch and 6-inch; 16 fire hydrants, 4-inch.

From (2) by pumping direct to industrial plant through 12-inch force main, 0.4 mile long; pressures 90 to 110 pounds.

CONSUMPTION

Supply to 1,500 people; 215 taps. Stated daily consumption 1,500,000 gallons, 15% domestic and 85% industrial. No means of measurement.

WEHRUM (BUFFINGTON TWP.), INDIANA COUNTY

BUFFINGTON WATER COMPANY.
EAST WHEATFIELD WATER COMPANY
(Lackawanna Coal & Coke Company)

Estimated 1915 population, 600a

LOCATION

Southeastern Indiana County, along north side of Black Lick Creek; on Pennsylvania R. R. and Southern Cambria Electric Ry.

INDUSTRIES

Mining village of Lackawanna Coal & Coke Co.

WATER SUPPLY

Buffington Water Co., incorporated 1900 for Buffington Township, East Wheatfield Water Co., incorporated same year for East Wheatfield Township; owned by Lackawanna Coal & Coke Co.

SOURCE AND COLLECTION

Rummels Run, tributary of Black Lick Creek, opposite village; 16,000,000 gallon reservoir 0.5 mile above mouth. Water by gravity to 30,000 gallon concrete reservoir in village; pumped by three Jeanesville pumps to mine and houses.

DISTRIBUTION

By pumping direct to system, with connection to 75,000 gallon equalizing reservoir on hilltop north of village.

CONSUMPTION

Supply to 600 people, and boilers of mine; 120 taps. Average daily consumption 23,000 gallons domestic and 98,000 gallons industrial; measured by pump displacement.

WHITNEY AND HOSTETTER VILLAGES (UNITY TWP.), WESTMORELAND COUNTY

PRIVATE SUPPLY

Estimated 1915 population Whitney, 600b; Hostetter, 600b

LOCATION

About 1 mile apart in eastern central Westmoreland County, in valley of Nine Mile Run, a tributary of Loyalhanna Creek; on Pennsylvania R. R. and West Penn Rys.

INDUSTRIES

Hostetter-Connellsville Coke Co., 352 coke ovens at Whitney and 355 at Hostetter.

WATER SUPPLY

Private system of Hostetter-Connellsville Coke Co.; auxiliary supply from Westmoreland Water Co. (Description under Greensburg, Section No. 19.)

SOURCE AND COLLECTION

Armel Hollow Run, tributary of Nine Mile Run, south of Baggaley, 21,430,000 gallon reservoir feeds 7,500,000 gallon reservoir. Water pumped into distributing tanks at each village; capacity of pump 648,000 gallons per day.

DISTRIBUTION

By gravity from tanks to outside hydrants at houses and to coke ovens.

CONSUMPTION

	Whitney	Hostetter	Total
Population supplied,	600	600	1,200
Number of hydrants,	20	20	40
Average daily consumption (industrial),	197,200	273,200	470,400 gals.
Average daily consumption (domestic),	15,600	18,000	33,600 gals.

WILKINSBURG AND TERRITORY EAST OF PITTSBURGH, ALLEGHENY COUNTY

PENNSYLVANIA WATER COMPANY

RANKIN WATER WORKS

	Population 1910 census	Increase since 1900	Estimated 1915
East Pittsburgh,	5,615	2,732	6,800
Edgewood,	2,596	1,457	3,300
North Braddock,	11,824	5,289	14,400
Pitcairn,	4,975	2,374	6,600
Rankin,	6,042	2,267	(7,500)
Swissvale,	7,381	5,665	10,200
13th ward, Pittsburgh,	11,306	----------	(12,400)
Turtle Creek,	4,995	1,733	5,500
Wilkinsburg,	18,924	7,038	22,400
Wilmerding,	6,133	1,954	7,000
Townships in district,	----------	----------	5,200
Total,	----------	----------	81,400

LOCATION

Eastern Allegheny County, adjacent to Pittsburgh City and along north bank of Monongahela River; on Pennsylvania R. R., Baltimore & Ohio R. R., Pittsburgh Rys. and several small terminal railroads.

INDUSTRIES

Suburban residential district; many large manufacturing plants.

WATER SUPPLY

Pennsylvania Water Co., incorporated 1902 as merger of eight companies; first works built on Allegheny River by original Pennsylvania Water Co. 1889; intake changed 1895. Territory supplied is in Monongahela Sub-basin, Section No. 19. but source of supply is in Lower Allegheny Sub-basin Section No. 18.

Rankin Municipal Water Works supplied by Pennsylvania Water Co.

SOURCE AND COLLECTION

Allegheny River; intake and pumping station on south bank of Nadine, short distance above Pittsburgh City line and 1,000 feet above that city's intake; three timber filter cribs about 300 feet from north shore. An 18-inch emergency intake direct to river about 3 feet lower than mean low water, used when water is clear, it being claimed that the slight turbidity facilitates filtering. Water pumped through 30-inch force main to filter plant, 1 mile south, at elevation

1,300 or 600 feet above river, on divide between Allegheny and Monongahela rivers. Pumping equipment a 6,000,000 gallon Nordberg pump, two 10,000,000 gallon Allis-Chalmers pumps, two 250 hp. Hegan, two 312 hp. Heine and two 350 hp. Stirling water tube boilers. Filter plant mechanical. 12,500,000 gallons capacity; reservoir No. 1, capacity 9,150,000 gallons, used as clear water basin.

DISTRIBUTION

By gravity from reservoir No. 1 through 42-inch main, reducing in size, in southerly direction east of territory served, 4 miles to reservoir No. 2, capacity 11,500,000 gallons; branch lines lead west to Thirteenth Ward of Pittsburgh, Edgewood, Swissvale and Rankin.

A 30-inch gravity main from reservoir No. 2, reducing to 24-inch, to two 16-inch mains at East Pittsburgh, one to reservoir No. 3, at Port Perry, capacity 5,000,000 gallons used as an equalizer to store water delivered from No. 2 reservoir. Branch lines supply North Braddock, Bessemer Terrace, East Pittsburgh and west of Turtle Creek. Other 16-inch main continues east through Turtle Creek and North Wilmerding to reservoir No. 4, on hill between Pitcairn and Wilmerding; capacity 6,290,000 gallons, used for surplus storage. Supplies part of Turtle Creek, Wilmerding, North Wilmerding and Pitcairn. In Pitcairn auxiliary pumping station forces water to 85,000 gallon steel tank for supply to high service district. Pumping equipment a Deming triplex pump driven by 25 hp. Brighton gas engine.

MAINS, HYDRANTS AND PRESSURES

Place	Total length of distributing mains 4-inch and larger Apr. 1, 1914		Fire hydrants Jan. 1, 1915		Pressures (pounds)	
	Miles	Per cent.	No.	Per cent.	Max.	Min.
Braddock Boro., 4th ward,	1.0	0.7			200	175
Edgewood Boro.,	7.6	5.0	40	7.0	190	100
E. Pittsburgh Boro.,	6.6	4.3	25	3.8	110	75
E. McKeesport Boro.,	0.4	0.3				
N. Braddock Boro.,	15.3	10.0	76	11.6	175	40
Pitcairn Boro.,	5.5	3.6	21	3.2	140	25
Pittsburgh City:						
13th ward,	15.1	9.8	97	14.8	175	40
12th ward,	3.0	2.0	27	4.1	190	175
14th ward,	1.4	0.9	3	0.5	175	75
Swissvale Boro.,	16.8	10.9	87	13.3	210	20
Turtle Creek Boro.,	8.8	5.7	33	5.1	160	40
Wilkinsburg Boro.,	30.1	19.7	187	28.6	180	35
Wilmerding Boro.,	7.2	4.7	52	8.0	150	100
Braddock Twp.,	6.6	4.2			150	40
N. Versailles Twp.,	4.6	3.0			125	50
Patton Twp.,	3.4	2.2			150	40
Penn Twp.,	13.8	9.0			150	10
Wilkins Twp.,	6.2	4.0			125	40

CONSUMPTION

Supply to 93,800 people in boroughs and surrounding townships through 13,434 active and 1,253 inactive taps, practically all metered. Supplies Rankin Water Works and Trafford Water Co. Average daily pumpage 8,594,400 gallons, divided as follows: Domestic consumption 2,940,000 gallons, industrial consumption 4,785,000 gallons, municipal buildings and flush tanks, 94,700 gallons, Pennsylvania Water Co. 95,600 gallons, unaccounted for 1,579,100 gallons, total 8,594,400 gallons.

Proportioning the amount unaccounted for between domestic and industrial consumption, the per capita consumption is about 32 gallons domestic or 92 gallons for total, a low figure for such a system, probably because well metered.

HISTORICAL

Pennsylvania Water Co. is merger in 1902 of following companies:

Name	Inc.	Incorporated for
Artesian Water Co. of Wilkinsburg,	1902	Wilkinsburg Borough
Citizens Water Co.,	1890	Braddock Township
E. Pittsburgh Water Co.,	1888	N. Versailles Township
Manufacturers Water Co.,	1889	Patton Township
Pennsylvania Water Co.,	1887	Sterrett Township
Peoples Water Supply Co.,	1889	Wilkins Township
Rural Water Co.,	1889	Wilkins Township
Valley Water Co.,	1889	Penn Township

Pennsylvania Water Co. purchased property and franchises of Penn Water Co., incorporated 1887 for Braddock Township. First works built 1889 by Pennsylvania Water Co., comprising intake in Allegheny River, at Wildwood, a storage reservoir on hill, and supply pipes to Brushton, now a part of Thirteenth Ward of Pittsburgh City, and to Wilkinsburg, incorporated out of Sterrett Township.

In 1899 the Pennsylvania Water Co. purchased stock of East Pittsburgh Water Co. and its subsidiaries. The East Pittsburgh Water Co., under old name of Turtle Creek Valley Water Co., installed a system in 1889, using Monongahela River at Port Perry; works consisting of intake, pumping station and storage reservoir. This intake is maintained for use only in emergencies.

Several boroughs now supplied by Pennsylvania Water Co. incorporated out of townships which had water supply systems previously installed.

RANKIN MUNICIPAL WORKS

DISTRIBUTION

By gravity from reservoir No. 1, delivery main of Pennsylvania Water Co.; pressures 80 to 120 pounds; 6.5 miles distributing mains, 4 inch to 10-inch; 52 fire hydrants, 4-inch.

CONSUMPTION

Supply to 7,500 people; through 800 taps, all metered, 10 industrial. Average daily consumption 200,000 gallons, 170,000 domestic and 30,000 industrial, included in consumption given for Pennsylvania Water Co.

SECTION No. 19.

OHIO RIVER

MONONGAHELA SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

Table of Industrial Water Supplies (Coal Companies)

SECTION No. 19.

OHIO RIVER—MONONGAHELA SUB-BASIN.

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section is in southwestern Pennsylvania, with its southern boundary on the State line and is south of the Lower Allegheny and east of the Main Ohio sub-basins. It is nearly triangular in shape, with Pittsburgh at the apex, extends south about 50 miles to the 90 mile base on the State line, has an area of 2,728 square miles, and drains through the Monongahela into the Allegheny River.

It includes all of Fayette County, large portions of Westmoreland, Washington, Somerset and Green Counties, and small portion of Allegheny County. The part of city of Pittsburgh in this section is described with that city in Section No. 18.

SURFACE CHARACTERISTICS

It is in the Allegheny plateau region, the northern portion having broad, rolling valleys, while to the south these are narrow and deep. It drains to the north through the Monongahela and its principal tributary, the Youghiogheny. Their principal tributaries are Dunkard and Ten Mile creeks, from the west, and Castleman River and Laurel Hill, Indian, Jacobs and Sewickley creeks, from the east.

POPULATION

The population in 1910 was nearly 721,000, an increase of 54% since 1900. The density of population is 264 per square mile, varying from about 60 in the southern part to 340 in Westmoreland County and 1,262 in Allegheny County (not including any part of Pittsburgh). The urban population is 44%.

RESOURCES AND INDUSTRIES

Bituminous coal mining and coke manufacturing are the principal industries, besides which there are iron and steel and a large number of important manufacturing plants in the northern part, near Pittsburgh. Lumbering is an important industry in Somerset County, and agriculture in Westmoreland, Somerset, Washington and Greene counties,

WATER SUPPLY

The streams in most of this section are largely utilized for water supply. The Monongahela and Youghiogheny rivers furnish the greatest amount, and are the sources of supply for many systems, while numerous tributaries are used for small public and private industrial systems. Some watershed areas in the southwest and southeast corners of the section are not as yet much developed for water supply. Coke plants, railroad and public systems in the coke regions in Fayette County were, in many instances, short of water during the fall of 1914.

This section stands first in the State as regards the amount of water consumption, although Pittsburgh is not included; it exceeds Section No. 18, which contains that city, by 87%, the total amounting to over 631,000,000 gallons. Of this quantity over 8% is used in public systems and the remainder is taken through private systems for industrial use. These industries are most numerous on the Monongahela, but there are a number on the Youghiogheny River, while the extensive system of the Trotter Water Co. (H. C. Frick Coke Co.) draws from both. Nearly three times as many systems are supplied by pumping as by gravity.

Ten systems supply water to several places each, four being distinctly industrial although incidentally furnishing a domestic supply as well. The others serve the public. The amount of water supplied by each ranges from 1,000,000 to over 8,000,000 gallons; in the latter instance the Trotter Water Co., operating an extensive system, supplies about 50 small villages grouped around coke plants. The aggregate population served by water supply systems is over 469,500.

There are eight municipal water works in the section, those of Braddock and Homestead being the largest.

Among the most notable private industrial water users may be mentioned the Carnegie Steel Co. with eight plants at different places along the Monongahela River south of Pittsburgh, using an aggregate of 294,000,000 gallons daily; the American Steel & Wire Manufacturing Co., having three plants, using 59,000,000 gallons per day; the Jones & Laughlin Steel Co., using 90,000,000 gallons daily; the Pittsburgh Steel Co., using 45,000,000 gallons daily, and the National Tube Company, five plants, using 29,000,000 gallons. There are numerous other large plants, as shown in the table of industrial supplies; the total amount of water used by industries, as recorded, is nearly 553,000,000 gallons, of which from 80 to 95% is said to be returned to the stream at the point of intake, with increased temperature from 0 to 50 degrees.

The railroads in this section use over 15,300,000 gallons, about 75% from public systems. The coal and coke plants use almost

14,000,000 gallons from private sources. Of the total reported consumption in this section, 92% is from private plants and 95% is for industrial use.

The following tables give a summary of the water supplies in this section, both domestic and industrial, after which are detailed descriptions of the water supply systems arranged alphabetically according to places supplied:

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 19

Place	County	Company	Population 1915	Population Supplied	City Company	City Municipal	Borough Company	Borough Municipal	Borough Private	Village Company	Village Private
Belle Vernon,	Fayette,	Belle Vernon W. Co.,	4,400	3,900			1				
N. Belle Vernon,	Westmoreland,						—				
Gibsontown,	Westmoreland, Rostraver Twp.,									—	
Priedale,	Westmoreland, Rostraver Twp.,									—	
Berlin,	Somerset,	Berlin W. Co.,	1,400b	900			1				
Braddock,	Allegheny,	Municipal,	22,000	20,000				1			
Brownsville,	Fayette,	Brownsville W. Co.,	10,000	10,000			1				
South Brownsville,	Fayette,						—				
West Brownsville,	Washington,						—				
Brush Run,	Westmoreland, Mt. Pleasant Twp.,	Brush Run W. Co.,	15	15						1	
California,	Washington,	California W. Co.,	2,700	1,500			1				
Calumet,	Westmoreland, Mt. Pleasant Twp.,	Sewickley W. Co.,	2,025	2,025						1	
Mammoth,	Westmoreland, Mt. Pleasant Twp.,									—	
United,	Westmoreland, Mt. Pleasant Twp.,									—	
Carnegie,	Allegheny,	South Pittsburgh W. Co.,	11,600	124,400			1			†	
Bridgeville,	Allegheny,		2,100				—				
Carrick,	Allegheny,		9,600				—				
Crafton,	Allegheny,		5,500				—				
Dormont,	Allegheny,		2,100				—				
Greentree,	Allegheny,		1,250				—				
Hays,	Allegheny,		2,000				—				
Heidelberg,	Allegheny,		2,050				—				
Ingram,	Allegheny,		3,100				—				
Knoxville,	Allegheny,		6,600				—				
Mt. Oliver,	Allegheny,		5,200				—				
Munhall,	Allegheny,		6,100				—				
Rosslyn Farms,	Allegheny,		600				—				
St. Clair,	Allegheny,		6,700				—				
Thornburg,	Allegheny,		350				—				
Pittsburgh, 18th, 19th & 20th wards	Allegheny,		(66,000)		g						
Westwood,	Allegheny,		1,000				—				
Whitaker,	Allegheny,		2,000				—				
Nine Townships,	Allegheny,		(50,000								
Cokeburg,	Washington,	Ellsworth Collieries Co.,					—		††		
Ellsworth,	Washington,										

Coke Regions, 47 villages,	Fayette and Westmoreland,	Trotter W. Co. (H. C. Frick Coke Co.)	33,000	30,095						1h	
Confluence,	Somerset,	Citizens W. Co. of Confluence,	1,000	600			1				
		Private,		45					1		
Connellsville,	Fayette,	The Connellsville W. Co. (American W. Wks. & Electric Co.)	15,034x	16,800	1						
So. Connellsville,	Fayette,		2,000b				—				
Dawson,	Fayette,	Municipal,	900	350				1			
Dunbar,	Fayette,	Dunbar W. S. Co.,	2,000b	500			1				
Duquesne,	Allegheny,	Municipal,	16,000	16,000				1			
East McKeesport,	Allegheny,	East McKeesport W. Co.,	2,500b	2,500			1				
Fairchance,	Fayette,	Municipal,	2,000	600				1		*	
Fayette City,	Fayette,	Fayette City W. Co.,	3,400b	2,000b			1			—	
Arnold City,	Fayette, Washington Twp.,									—	
Brownstown,	Fayette, Washington Twp.,									1	
Fredericktown,	Washington, E. Bethlehem Twp.,	Fredericktown W. Co.,	500	500						—	
Newton,	Washington, E. Bethlehem Twp.,										
Garrett,	Somerset,	Garrett W. Co.,	1,200	1,200			1				
Gladehurst,	Somerset, Somerset Twp.,	Gladehurst W. Co.,	200	50						1	
Glassport,	Allegheny,	Monongahela Valley W. Co.,	15,080b	14,000			1				
Dravosburg,	Allegheny,										
Elizabeth,	Allegheny,										
Clairton,	Allegheny,										
McKeesport, 10th ward,	Allegheny,										
Otto,	Allegheny,										
West Elizabeth,	Allegheny,										
Wilson,	Allegheny,										
Greensburg,	Westmoreland,	Westmoreland W. Co.,	41,000	41,000			1				
Irwin,	Westmoreland,										
Jeannette,	Westmoreland,										
Manor,	Westmoreland,										
North Irwin,	Westmoreland,										
Penn,	Westmoreland,										
South Greensburg,	Westmoreland,										
Southwest Greensburg,	Westmoreland,										
Youngwood,	Westmoreland,										
Carbon,	Westmoreland, Hempfield Twp.,										
Fosterville,	Westmoreland, Hempfield Twp.,										
Huff	Westmoreland, Hempfield Twp.,										
Pleasant Unity,	Westmoreland, Unity Twp.,										
Westmoreland City,	Westmoreland, N. Huntingdon Twp.										
Homestead,	Allegheny,	Municipal,	25,000	18,000				1			
West Homestead,	Allegheny,							—			
McKeesport,	Allegheny,	Municipal,	46,713x	41,000b		1					
		Monongahela Valley W. Co.,									
Marianna,	Washington,	Marianna W. Co.,	1,500	1,500			1				
Markleton,	Somerset, Addison Twp.,	Gravity W. Co.,	250	250						1	
Upper Turkeyfoot Township	Somerset,	Hillside W. S. Co.,									
Black Township,	Somerset,	Pure Mountain W. Co.,									

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 19—Continued

Place	County	Company	Population 1915	Population Supplied	City Company	City Municipal	Borough Company	Borough Municipal	Borough Private	Village Company	Village Private
Masontown,	Fayette,	Municipal,	950	1,000				1			
Meyersdale,	Somerset,	Sand Spring W. Co. of Myersdale,	4,000b	3,200			1				
Monessen,	Washington and Westmoreland,	Tri-Cities W. Co.,	36,900	36,900			1				
Charleroi,	Washington and Westmoreland,										
Donora,	Washington and Westmoreland,										
North Charleroi,	Washington and Westmoreland,										
South Donora,	Washington and Westmoreland, Carroll Twp.										
Wirton,	Washington and Westmoreland, Rostraver Twp.										
Monongahela City,	Washington,	Monongahela City W. Co.,	10,800	5,600	1						
New Eagle,	Washington,						—				
Monongahela,	Allegheny, Forward Twp.,	Axleton W. Co.,	100	100						1	
Oliver,	Fayette, North Unity Twp.,	The South West W. Co.,	2,825b	2,000						1	
Mt. Braddock,	Fayette, North Unity Twp.,									—	
Revere,	Fayette, Menallen Twp.,									—	
New Dickerson Run,	Fayette, Dunbar and Franklin Twps.	Dickerson Run W. Co.,	500	60						1	
Mt. Pleasant,	Westmoreland,	Mt. Pleasant W. Co.,	6,285	13,680			1				
Acme,	Westmoreland, E. Huntingdon Twp.		410							—	
Alice,	Westmoreland, E. Huntingdon Twp.		250							—	
Bridgeport,	Westmoreland, Mt. Pleasant Twp.,		1,015							—	
Central,	Westmoreland, E. Huntingdon Twp.		555							—	
Hecla No. 1 and Hecla No. 3,	Westmoreland, Mt. Pleasant Twp.,		1,295							—	
Morewood,	Westmoreland, E. Huntingdon Twp.		1,135							—	
Tarrs,	Westmoreland, E. Huntingdon Twp.		560							—	
Standard,	Westmoreland, Mt. Pleasant Twp.,		1,480							—	
Country Districts,	Westmoreland,									—	
Outcrop,	Fayette, Spring Hill Twp.,	Rich Hill W. Co.,	250	250						1	
Port Marion,	Fayette,	Spring Hill W. Co.,	2,500	1,500			1				

Port Vue,	Allegheny,	§Port Vue W. Co.,	2,300	1,500	------	------	1	------	------	------	------
Republic,	Fayette, Redstone Twp.,										
Allison,	Fayette, Redstone Twp.,										
Brier Hill,	Fayette, Redstone Twp.,										
Orient,	Fayette, Redstone Twp.,	General W. Co.,	5,000	5,000	------	------	------	------	------	1	------
Rainey,	Fayette, Redstone Twp.,										
Royal,	Fayette, Redstone Twp.,										
Thompson,	Fayette, Redstone Twp.,										
Tower Hill,	Fayette, Redstone Twp.,										
Rockwood,	Somerset,	Rockwood W. Co.,	1,500	1,500	------	------	1	------	------	------	------
Scottdale and vicinity,	Fayette and Westmoreland,	Citizens W. Co. of Scottdale,	10,000b	10,000	------	------	1	------	------	k	------
Somerset,	Somerset,	Municipal,	3,200	3,000	------	------	------	1	------	------	------
Somerset County Home,	Somerset,	Private,	(300)	(300)	------	------	------	------	------	------	------
Trafford,	Allegheny and Westmoreland,	¶Trafford W. Co.,	2,500	2,000	------	------	1	------	------	------	------
Uniontown,	Fayette,	Uniontown W. Co.,	19,344x	26,000	1	------	------	------	------	------	------
Ursina,	Somerset,	Private, W. E. VanSickel,	300	34	------	------	------	------	1	------	------
Waynesburg,	Greene,	Waynesburg W. Co.,	4,500b	4,000	------	------	1	------	------	------	------
East Waynesburg,			------	------	------	------	—	------	------	------	------
West Waynesburg,	Greene, Franklin Twp.,		------	------	------	------	------	------	------	—	------
West Newton,	Westmoreland,	West Newton W. Co. of West Newton	3,000	2,000	------	------	1	------	------	------	------

bEstimated by Water Supply Commission.
xUnited States census.
gPittsburgh description in Section No. 18.
hFor list of places see page 45, supply furnished to 47 villages.
kFor list of places see page 1219; supply furnished to Scottdale and 8 neighboring villages.
†Supply to 9 townships.
††Cokeburg and Ellsworth boroughs are supplied from private industrial system owned by Ellsworth Collieries Co.
*See Trotter Water Co.
§Monongahela Valley Water Co.

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 19—*Continued*

Place	County	Company	Supply: Source: Surface	Supply: Source: Ground	Supply: Source: Combined	Supply: Method: Gravity	Supply: Method: Pumped	Supply: Method: Combined	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Belle Vernon,	Fayette,	Belle Vernon W. Co.,	1	---	---	---	1	---	60,200	49,400	109,600	28t
N. Belle Vernon,	Westmoreland,											
Gibsontown,	Westmoreland, Rostraver Twp.,											
Pricedale,	Westmoreland, Rostraver Twp.,											
Berlin,	Somerset,	Berlin W. Co.,	---	1	---	1	---	---	----------	----------	40,000a	------
Braddock,	Allegheny,	Municipal,	---	---	1	---	1	---	3,150,000	350,000	3,500,000	175t
Brownsville,	Fayette,	Brownsville W. Co.,	1	---	---	---	1	---	800,000	200,000	1,000,000	100t
South Brownsville,	Fayette,											
West Brownsville,	Washington,											
Brush Run,	Westmoreland, Mt. Pleasant Twp.,	Brush Run W. Co.,	---	1	---	1	---	---	1,000a	----------	1,000a	------
California,	Washington,	California W. Co.,	1	---	---	---	1	---	90,000	10,000	100,000	67t
Calumet,	Westmoreland, Mt. Pleasant Twp.,	Sewickley W. Co.,	---	---	1	---	1	---	50,630	673,650	724,280	357t
Mammoth,	Westmoreland, Mt. Pleasant Twp.,											
United,	Westmoreland, Mt. Pleasant Twp.,											
Carnegie,	Allegheny,	South Pittsburgh W. Co.,	1	---	---	---	1	---	6,520,000	1,000,000	7,520,000	60t
Bridgeville,	Allegheny,											
Carrick,	Allegheny,											
Crafton,	Allegheny,											
Dormont,	Allegheny,											
Greentree,	Allegheny,											
Hays,	Allegheny,											
Heidelberg,	Allegheny,											
Ingram,	Allegheny,											
Knoxville,	Allegheny,											
Mt. Oliver,	Allegheny,											
Munhall,	Allegheny,											
Rosslyn Farms,	Allegheny,											
St. Clair,	Allegheny,											
Thornburg,	Allegheny,											
Pittsburgh, 18th, 19th & 20th wards	Allegheny,											

Westwood,	Allegheny,											
Whitaker,	Allegheny,											
Nine Townships,	Allegheny,											
Cokeburg,	Washington,	Ellsworth Collieries Co.,	---	---	---	---	---	---	---	---	---	---
Ellsworth,	Washington,											
Coke Regions, 47 villages,	Fayette and Westmoreland,	Trotter W. Co. (H. C. Frick Coke Co.)	1	---	---	---	---	1	823,800	7,414,261	8,238,061	27d
Confluence,	Somerset,	Citizens W. Co. of Confluence,	1	---	---	1	---	---	123,000a	127,000a	250,000a	---
		Private,	---	1	---	1	---	---	1,500b	---	1,500b	---
Connellsville,	Fayette,	The Connellsville W. Co. (American W. Wks. & Electric Co.)	1	---	---	1	---	---	1,500,000a	175,000a	1,675,000a	---
So. Connellsville,	Fayette,											
Dawson,	Fayette,	Municipal,	---	1	---	---	1	---	8,000a	---	8,000a	---
Dunbar,	Fayette,	Dunbar W. S. Co.,	---	---	1	---	---	1	25,000a	2,095,000a	2,120,000a	---
Duquesne,	Allegheny,	Municipal,	---	1	---	---	1	---	843,200	6,800	850,000	53t
East McKeesport,	Allegheny,	East McKeesport W. Co.,	---	1	---	1	---	---	30,000b	---	30,000b	---
Fairchance,	Fayette,	*Municipal,	1	---	---	---	---	1	---	---	28,200a	---
Fayette City,	Fayette,											
Arnold City,	Fayette, Washington Twp.,	Fayette City W. Co.,	---	1	---	---	1	---	60,000b	40,000b	100,000b	---
Brownstown,	Fayette, Washington Twp.,											
Fredericktown,	Washington, E. Bethlehem Twp.,	Fredericktown W. Co.,	1	---	---	---	1	---	21,000	---	21,000	42d
Newton,	Washington, E. Bethlehem Twp.,											
Garrett,	Somerset,	Garrett W. Co.,	---	---	1	---	---	1	75,000a	25,000a	100,000a	---
Gladehurst,	Somerset, Somerset Twp.,	Gladehurst W. Co.,	---	1	---	---	1	---	2,000	---	2,000	13d
Glassport,	Allegheny,											
Dravosburg,	Allegheny,											
Elizabeth,	Allegheny,											
Clairton,	Allegheny,	Monongahela Valley W. Co.,	1	---	---	---	1	---	1,175,000a	325,000a	1,500,000a	---
McKeesport, 10th ward,	Allegheny,											
Otto,	Allegheny,											
West Elizabeth,	Allegheny,											
Wilson,	Allegheny,											
Greensburg,	Westmoreland,											
Irwin,	Westmoreland,											
Jeannette,	Westmoreland,											
Manor,	Westmoreland,											
North Irwin,	Westmoreland,											
Penn,	Westmoreland,											
South Greensburg,	Westmoreland,											
Southwest Greensburg,	Westmoreland,	Westmoreland W. Co.,	1	---	---	---	---	1	411,000	1,122,000	1,533,000	37t
Youngwood,	Westmoreland,											
Carbon,	Westmoreland, Hempfield Twp.,											
Fosterville,	Westmoreland, Hempfield Twp.,											
Huff,	Westmoreland, Hempfield Twp.,											
Pleasant Unity,	Westmoreland, Unity Twp.,											
Westmoreland City,	Westmoreland, N. Huntingdon Twp.											
Homestead,	Allegheny,	Municipal,	---	---	1	---	1	---	2,475,000	25,000	2,500,000	139t
West Homestead,	Allegheny,											
McKeesport,	Allegheny,	Municipal,	1	---	---	---	1	---	---	---	6,000,000b	---
		Monongahela Valley W. Co.,	---	---	---	---	---	---	‡	---	---	---

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 19—Continued

Place	County	Company	Supply						Consumption (average daily)			
			Source			Method						
			Surface	Ground	Combined	Gravity	Pumped	Combined	Domestic (gals.)	Industrial (gals.)	Total (gals.)	Per capita (gals.)
Marianna,	Washington,	Marianna W. Co.,	1	---	---	---	1	---	300,000	400,000	700,000	470t
Markleton,	Somerset, Addison Twp.,	Gravity W. Co.,										
Upper Turkeyfoot Township	Somerset,	Hillside W. S. Co.,	1	---	---	1	---	---	25,000a	----------	25,000a	------
Black Township,	Somerset,	Pure Mountain W. Co.,										
Masontown,	Fayette,	Municipal,	1	---	---	---	1	---	44,100	900	45,000	45t
Meyersdale,	Somerset,	Sand Spring W. Co. of Myersdale,	---	---	1	---	---	1	185,000a	20,000a	205,000a	------
Monessen,	Washington and Westmoreland,											
Charleroi,	Washington and Westmoreland,											
Donora,	Washington and Westmoreland,											
North Charleroi,	Washington and Westmoreland,	Tri-Cities W. Co.,	1	---	---	---	1	---	2,780,000	170,000	2,950,000	80t
South Donora,	Washington and Westmoreland, Carroll Twp.											
Wireton,	Washington and Westmoreland, Rostraver Twp.											
Monongahela City,	Washington,	Monongahela City W. Co.,	1	---	---	---	1	---	240,000	160,000	400,000	80t
New Eagle,	Washington,											
Monongahela,	Allegheny, Forward Twp.,	Axleton W. Co.,	1	---	---	---	1	---	2,000	148,000	150,000	20d
Oliver,	Fayette, North Unity Twp.,											
Mt. Braddock,	Fayette, North Unity Twp.,	The South West W. Co.,	1	---	---	---	1	---	58,300	524,900	583,200	29d
Revere,	Fayette, Menallen Twp.,											
New Dickerson Run,	Fayette, Dunbar and Franklin Twps.	Dickerson Run W. Co.,	---	1	---	---	1	---	750	----------	750	12d
Mt. Pleasant,	Westmoreland,											
Acme,	Westmoreland, E. Huntingdon Twp.											
Alice,	Westmoreland, E. Huntingdon Twp.											
Bridgeport,	Westmoreland, Mt. Pleasant Twp.,											
Central,	Westmoreland, E. Huntingdon Twp.	Mt. Pleasant W. Co.,	1	---	---	---	1	---	1,045,300	1,255,800	2,301,100	168t
Hecla No. 1,	Westmoreland, Mt. Pleasant Twp.,											

Hecla No. 3,	Westmoreland, Mt. Pleasant Twp.,										
Morewood,	Westmoreland, E. Huntingdon Twp.										
Tarrs,	Westmoreland, E. Huntingdon Twp.										
Standard,	Westmoreland, Mt. Pleasant Twp.,										
Country Districts,	Westmoreland,										
Outcrop,	Fayette, Spring Hill Twp.,	Rich Hill W. Co.,	1	---	---	1	---	---	4,000a	16,000a	20,000a	------
Port Marion,	Fayette,	Spring Hill W. Co.,	1	---	---	---	1	---	45,000	40,000	85,000	56t
Port Vue,	Allegheny,	§Port Vue W. Co.,	1	---	---	---	1	---	35,000	----------	35,000	23d
Republic,	Fayette, Redstone Twp.,											
Allison,	Fayette, Redstone Twp.,											
Brier Hill,	Fayette, Redstone Twp.,											
Orient,	Fayette, Redstone Twp.,	General W. Co.,	1	---	---	---	1	---	20,000a	3,480,000a	3,500,000a	------
Rainey,	Fayette, Redstone Twp.,											
Royal,	Fayette, Redstone Twp.,											
Thompson,	Fayette, Redstone Twp.,											
Tower Hill,	Fayette, Redstone Twp.,											
Rockwood,	Somerset,	Rockwood W. Co.,	---	---	1	---	---	1	150,000	450,000	600,000	400t
Scottdale and vicinity,	Fayette and Westmoreland,	Citizens W. Co. of Scottdale,	1	---	---	1	---	---	----------	----------	2,073,000a	------
Somerset,	Somerset,	Municipal,	---	1	---	---	1	---	230,500	12,100	242,600	81t
Somerset County Home,	Somerset,	Private,	---	---	---	---	---	---	16,000	----------	16,000	53d
Trafford,	Allegheny and Westmoreland,	¶Trafford W. Co.,	1	---	---	---	1	---	52,000	133,000	185,000	92t
Uniontown,	Fayette,	Uniontown W. Co.,	1	---	---	1	---	---	1,500,000	1,000,000	2,500,000	125t
Ursina,	Somerset,	Private, W. E. VanSickel,	---	1	---	1	---	---	2,000a	----------	2,000a	------
Waynesburg,	Greene,											
East Waynesburg,	Greene,	Waynesburg W. Co.,	---	---	1	---	1	---	83,300	6,700	90,000	22t
West Waynesburg,	Greene, Franklin Twp.,											
West Newton,	Westmoreland,	West Newton W. Co. of West Newton	---	1	---	---	1	---	100,000	50,000	150,000	75t

aEstimated by water companies.
dDomestic.
tTotal.
*See Trotter Water Co.
‡Listed under Glassport, q. v.
§Monongahela Valley Water Co.
¶Pennsylvania Water Co.

RAILROAD WATER SUPPLIES, SECTION No. 19.

PENNSYLVANIA

Station	Source of Supply	Method of supply	Average daily consumption	
			R. R.	Public
Pittsburgh Div'n				
County Home Jct.,	Mountain W. S. Co.,		52,200	
Blackburn "Y"	Mountain W. S. Co.,		50,000	
Duquesne Frt. Sta.,	Pittsburgh Municipal,			6,000
Export,	Westmoreland Coal Co.,		16,000	
Fairchance,	Municipal Works,			10,000
Everson,	Mountain W. S. Co.,		12,000	
Glass House Siding,	Mountain W. S. Co.,		20,000	
Grapeville,	Mountain W. S. Co.,		400,000	
Hempfield Branch,	Mountain W. S. Co.,		30,000	
Homewood,	Pittsburgh Municipal,			20,000
Manor "Y,"	Mountain W. S. Co.,		16,000	
New Haven,	Mountain W. S. Co.,		45,400	
Rainey Yard,	Mountain W. S. Co.,		25,000	
Pittsburgh Yard,	Pittsburgh Municipal,			545,000
Pitcairn,	Mountain W. S. Co., Wells,	Pumped,	1,500,900	
P. V. & C. Jct.,	Mountain W. S. Co.,		63,700	
Scottdale,	Citizens Water Co.,			60,200
Shafton,	Mountain W. S. Co.,		84,400	
Tarrs,	Mountain W. S. Co.,		300	
Youngwood,	Mountain W. S. Co.,		1,000,000	
Monongahela Div'n				
Bute,	Trotter Water Co.,			8,000
Charleroi,	Mountain W. S. Co.,		170,000	
Clairton,	Mountain W. S. Co.,		200,000	
Donora,	Mountain W. S. Co.,		21,000	
Ellsworth,	Ellsworth Colliery Co.,		35,000	
Howard,	Mountain W. S. Co.,		250,000	
Keister Jct.,	Mountain W. S. Co.,		25,000	
Marianna,	Marianna Water Co.,			25,000
Monongahela City,	Mountain W. S. Co.,		80,000	
Redstone Jct.,	Mountain W. S. Co.,		52,000	
Smock,	Mountain W. S. Co.,		32,000	
Shire Oaks,	Mountain W. S. Co.,		500,000	
30th St., Pittsburgh,	Mountain W. S. Co.,		600,000	
Thomson,	Mountain W. S. Co.,		325,000	
	Monongahela River,	Pumped,		
W. Brownsville Jct.,	Mountain W. S. Co.,		51,500	

MONONGAHELA

Brownsville Shops,	Brownsville W. Co.,			35,800
Brownsville Tank,	Brownsville W. Co.,			93,400
Footedale,	Trotter Water Co.,			5,500
Huron,	Trotter Water Co.,			31,900
Lambert,	Trotter Water Co.,			5,200
Leckrone,	Trotter Water Co.,			9,200
Republic,	General Water Co.,			31,000

WAYNESBURG & WASHINGTON

Baker,	Stream,	Pumped,	1,500	
Waynesburg,	Waynesburg W. Co.,			9,100
West Union,	Spring,	Gravity,	1,500	

BALTIMORE & OHIO

Bessemer,	Penna. Water Co.,			200,000
	Monongahela River,	Pumped,		
Boynton,	Piney River,	Pumped,	32,000	
Bruceton,	So. Pittsburgh W. Co.,			75,000
Emblem,	Youghiogheny River,	Pumped,	350,000	
Beechdale,	Buffalo Creek,	Gravity,	20,000	

RAILROAD WATER SUPPLIES, SECTION NO. 19—Continued

BALTIMORE & OHIO—Concluded

Station	Source of Supply	Method of supply	Average daily consumption	
			R. R.	Public
Broadford,	H. C. Frick Coke Co.,		10,000	
Confluence,	Confluence Water Co.,			225,000
Connellsville,	Youghiogheny River,	Pumped,	580,000	
Glenwood,	Monongahela River,	Pumped,	960,000	
Griffin,	15 m. g. reservoir,	Gravity,	200,000	
Juniata,	Trotter Water Co.,			10,000
Layton,	Perry Water Co.,		220,000	
Laughlin Jct.,	Pittsburgh Municipal,			75,000
Leckrone,	H. C. Frick Coke Co.,		15,000	
Leisenring,	Trotter Water Co.,			5,000
Mt. Braddock,	H. C. Frick Coke Co.,		30,000	
Mt. Pleasant,	Mt. Pleasant W. Co.,			6,000
Point Marion,	Spring Hill W. Co.,			75,000
Pinkerton,	Casselman River,	Pumped,	160,000	
	Small stream,	Gravity,		
Rockwood,	Rockwood Water Co.,			380,000
Sand Patch,	Flaugbert Creek,	Gravity & pumped	400,000	
Smithfield,	Wm. Borton,		200,000	
Somerset,	Kimbley Run,	Gravity,	300,000	
	Coxes Creek,	Pumped,		
Uniontown,	Uniontown W. Co.,			60,000
Versailles,	Emblem Supply,		100,000	
West Meyersdale,	Casselman River,	Pumped,	70,000	
West Newton,	West Newton W. Co.,			50,000
Washington,	Citizens Water Co.,			125,000
Taylorstown,	Mountain streams,	Pumped,	100,000	
Wylandville,	Mountain streams,	Pumped,	120,000	
Yoder,	Casselman River,		300,000	
Yough,	Laurel Run,	Gravity,	100,000	

PITTSBURGH & LAKE ERIE

Belle Vernon,	Belle Vernon W. Co.,			34,900
Braddock,	Monongahela River,		43,900	
Buena Vista,	Youghiogheny River,	Pumped,	39,700	
Dickerson Run,	Youghiogheny River,	Pumped,	296,500	
Jacobs Creek,	Youghiogheny River,	Pumped,	73,300	
Glassport,	Monongahela River,	Pumped,	347,300	
Lynch,	Youghiogheny River,	Pumped,	100,100	
Monessen,	Tri-City Water Co.,			42,500
Newell,	Monongahela River,	Pumped,	172,400	
Parke,	Monongahela River,	Pumped,	2,900	
Sunnyside,	Monongahela River,	Pumped,	104,700	
West Newton,	Youghiogheny River,	Pumped,	20,100	
Williamsburg,	Well,	Pumped,	150,100	

ALLEGHENY & SOUTH SIDE

Pittsburgh, So. Side,	Monongahela River,	Pumped,	9,000	

DONORA SOUTHERN

Donora,	American Steel & Wire Company		30,000	

MONONGAHELA CONNECTING

Pittsburgh, So. Side,	Jones & Laughlin Steel Company			98,000

RAILROAD WATER SUPPLIES, SECTION NO. 19—Continued

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
McKEESPORT CONNECTING				
McKeesport,	Monongahela River,	Pumped,	75,000	
ST. CLAIR TERMINAL				
Clairton,	Carnegie Steel Co.,		45,000	
UNION				
Bessemer,	Penna. Water Company,			
Hall,	Penna. Water Company,			
Mifflin Yard,	So. Pittsburgh Water Co.,			733,000
Monongahela Jct.,	Penna. Water Company,			
Duquesne,	Penna. Water Company,			
Universal,	Penna. Water Company,			
URSINA & NORTH FORK				
Humbert,	Laurel Hill Creek,		10,000	
WASHINGTON RUN				
Layton,	B. & O. R. R.,			
WABASH, PITTSBURGH TERMINAL				
Pittsburgh,	Monongahela River Well,	Pumped,	520,000	
Bridgeville,	So. Pittsburgh W. Co.,			14,000
Rook Yard,	So. Pittsburgh W. Co.,			200,000
WEST SIDE BELT				
Brownsville Road,	So. Pittsburgh W. Co.,			30,000
Clairton,	Monongahela Val. W. Co.,			11,300
Castle Shannon,	So. Pittsburgh W. Co.,			23,000
Pittsburgh, West End,	Pittsburgh Municipal,			10,000
Totals,			12,065,400	3,280,000

INDUSTRIAL WATER SUPPLIES (MISCELLANEOUS COMPANIES) SECTION NO. 19

Does Not Include all the Smaller Companies

Place	Company	Source	Method	Consumption (gallons per day) (industrial)	Daily amount of product	Returned to stream (%)	Increase in temp., °F.
Belle Vernon, Fayette County	American Window Glass Co.,	Monongahela River,	Pumped,	252,000		50	0
Braddock, Allegheny County,	American Steel & Wire Co.,	Monongahela River,	Pumped,	11,000,000	290 tons	98	25
	Standard Chain Co.,	Braddock mun. wks.,		(7,400)	25 tons	75	30
		Rankin municipal wks.,		(1,400)		75	30
	Carnegie Steel Co., Edgar Thomson steel wks. & furnaces	Monongahela River,	Pumped,	53,165,000	5,500 tons pig	99.32	45
				100,000	520 tons castings		
				8,400,000	2,500 tons steel		
				35,296,000	3,270 tons rolled		
		Pennsylvania Water Co.,		(62,500)		81	0
		Duquesne Steel Works,		30,000	410 tons flue dust briquettes	0	0
Charleroi, Washington County	Pittsburgh Plate Glass Co.,	Monongahela River,	Pumped,	500,000		95	0
	Macbeth-Evans Glass Co.,	Monongahela River,	Pumped,	350,000		85	0
Clairton, Allegheny County,	Carnegie Steel Co. (Steel Wks. & Furnaces)	Monongahela River,	Pumped,	12,400,000	1,167 tons pig	98	20
				1,500,000	1,333 O. H. Steel		
				10,000,000	1,167 tons finished material		
				1,100,000	General		
		Monongahela Valley W. Co.		(10,000)		100	0
		3 drilled wells,	Pumped,	*96,500			
Donora, Washington County	American Steel & Wire Co.,	Monongahela River,	Pumped,	36,000,000	2,000 tons	98	39
Dunbar, Fayette County,	The American Manganese Mfg. Co.	Dunbar Water Supply Co.,	(desc. under Dunbar, Sect. No. 19)	(1,420,000)			
Duquesne, Allegheny County,	Carnegie Steel Co. (Steel Wks. & Furnaces)	Monongahela River,	Pumped,	33,000,000	3,016 tons pig	95	30
				11,300,000	4,233 tons steel		
				29,200,000	5,323 tons rolled & general		
		Drilled wells,	Pumped,	*24,000			

INDUSTRIAL WATER SUPPLIES (MISCELLANEOUS COMPANIES) SECTION NO. 19—Continued

Place	Company	Source	Method	Consumption (gallons per day) (industrial)	Daily amount of product	Returned to stream (%)	Increase in temp., °F.
East Pittsburgh, Allegheny County	Westinghouse Mfg. Co.,	Penna. Water Co.,		(395,000)			
		Turtle Creek,	Pumped,	1,200,000			
	Westinghouse Electric & Manufacturing Co.	Penna. Water Co.,		(1,070,000)			
		Turtle Creek,	Pumped,	15,800,000			
	Pittsburgh Meter Co.,	Penna. Water Co.,		(28,000)			
		Drilled wells,	Pumped,	20,000			
Greensburg, Westmoreland County	The Kelly & Jones Co. (iron and brass fittings)	Westmoreland Water Company		s (123,623)	67 tons	0	0
Glassport, Allegheny County,	The American Axe & Tool Co.,	Monongahela River,		s 260,000		50	40
Hays, Allegheny County,	Harbison-Walker Refractories Co.	Monongahela River, So. Pittsburgh W. Co.		200,000	575 tons	60	to 110
Irwin, Westmoreland County,	Crescent Brewery,	North Irwin W. Co.,	(desc. under Greensburg, Sect. No. 19)				
Jeannette, Westmoreland County	American Window Glass Co.,	Drilled wells,	Pumped to reservoirs	65,000		50	Yes
Layton, Fayette County,	Harbison-Walker Refractories Co.	Youghiogheny River & small tributary	Pumped,	30,000	80 tons	60	to 110
McKeesport, Allegheny County	National Tube Co. (Nat. Wks.)	Monongahela River,	Pumped,	23,180,000	1,480 tons	95	15
		McKeesport Municipal,		(4,500)		90	0
Monessen, Westmoreland County	Page Woven Wire Fence Co.,	Monongahela River,	Pumped,	33,300	144 tons	90	0
	Pittsburgh Steel Products Co.,	Monongahela River,	Pumped,	1,000,000	84 tons	100	0
	Carnegie Steel Co. (Monessen steel works)	Monongahela River,	Pumped,	4,500,000	190 rolled	80	15
		Tri-Cities Water Co.,		(2,000)		75	0
Monongahela, Washington County	American Window Glass Co.,	Well near Monongahela River	Pumped,	220,000		64	20
Mt. Pleasant, Westmoreland County	Bryce Bros. Co. (glass),	Mt. Pleasant W. Co.,		(20,000)			
		Pittsburgh Brewing Co.,		s 20,000			
	Pittsburgh Brewing Co.,	Drilled wells (5),	Pumped,				
Munhall, Allegheny County,	Carnegie Steel Co. (Homestead steel works)	Monongahela River,	Pumped,	8,028,000	7,742 tons	80	20
				46,472,000	5,261 rolled		
		So. Pittsburgh W. Co.,		*(79,000)			

Pittsburgh, Allegheny County	Dilworth, Porter & Co., Ltd. (Glendon rolling mills)	Monongahela River,	Pumped,	5,000,000	293 tons	98	5
		Pittsburgh Municipal,		(52,000)			
	National Tube Co. (Republic Dept. of National Works)	Monongahela River,	Pumped,	755,000	(included in McKeesport)	90	15
		Pittsburgh Municipal,		(2,400)		90	0
	National Tube Company, Penna. Works	Monongahela River,	Pumped,	2,480,000	835 tons	92	0
		Pittsburgh Municipal,		(730)		25	0
	A. M. Byers Company (W. I. pipe & casing)	Monongahela River,	Pumped,	s 250,000 500,000)	178 tons	60	0
		Pittsburgh Municipal,		(4,600)			
	Jones & Laughlin Steel Co.,	Monongahela River,	Pumped,	90,000,000		99	10 to 15
	Pittsburgh Steel Co.,	Monongahela River,	Pumped,	45,000,000	1,230 tons		
	Oliver Iron & Steel Co.,	Monongahela River,	Pumped,	5,000,000	263 tons	95	20 to 40
	National Tube Co., Continental Works	Monongahela River,	Pumped,	2,142,000	267 tons	85	0
		Pittsburgh Municipal,		(12,800)		90	0
Rankin, Allegheny County,	Carnegie Steel Company, Carrie Furnaces	Monongahela River,	Pumped,	40,950,000	2,500 tons pig	85	38
		Penna. Water Co.,		*(3,600)			
	American Steel & Wire Co.,	Monongahela River,	Pumped,	12,000,000	470 tons	98	47
	McClintic-Marshall Cons. Co.,	Monongahela River,	Pumped,	c 800,000	219 tons	95	30
Scottdale, Westmoreland County	United States Cast Iron & Pipe Foundry Co.	Citizens Water Co. of Scottdale			310 tons		
Versailles, Allegheny County,	National Tube Co. (galvanizing plant of Nat'l Wks.)	Youghiogheny River,	Pumped,	415,000	(included in McKeesport)	90	10
		Drilled wells,	Pumped,			20	0
Trafford City, Westmoreland County	Westinghouse Electric Co.,	Penna. Water Co.,		(90,000)			
		Turtle Creek,	Pumped,	20,000			
West Homestead, Allegheny County	Mesta Machine Co.,	So. Pittsburgh W. Co.,		(175,000)		5	50
	Carnegie Steel Co. (Howard axle works)	Monongahela River,	Pumped,	2,560,000	320 tons	90	10
		So. Pittsburgh W. Co.,		(900)			
Wilkinsburg, Allegheny County	Iron City Stone & Concrete Co.	Private source,	Pumped,	1,600			0
		Penna. Water Co.,		(400)			
Total from private systems,				552,555,400			

sWater for steam purposes
cWater for cooling or condensing purposes
*Drinking

Place	Company	Source	Method	Consumption (gallons per day) Domestic	Consumption (gallons per day) Industrial	Daily amount of product short tons	Number of collieries supplied
Allegheny County—							
Bruceton,	Pittsburgh-Buffalo Co. (Bertha Mine)	South Pittsburgh Water Co.			s (50,000)	965 coal	1
Epton,	Crescent Coal Co. (Peters Creek Mines)	Drilled wells,	Pumped to 20,000 gal. tank		s 31,000	1,330 coal	3
Thomson,	The Youghiogheny & Ohio Coal Co.	Peters Creek,	Pumped to 20,000 gal. tank		s 20,000	1,040 coal	1
Fayette County—							
	H. C. Frick Coke Co.,	Private,		128,200 (1,745 pop.)	s 455,000 c 804,300		
		Trotter Water Co.,		(487,000)	s (1,897,200) c (3,789,900)	44,210 coal 24,650 coke	45
		Franklin Township Water Co.		26,130 (1,045 pop.)	s 63,400 c 190,000		
Alicia,	W. Harry Brown (coke),	Monongahela River,	Pumped,	10,000 (1,000 pop.)	s 40,000 c 200,000	1,160 coal 775 coke	1
Allison,	W. J. Rainey (coke),	Small streams,	35,000,000 gal. reservoir,	22,000 (880 pop.)	s 95,000 c 112,500	670 coal 415 coke	2
Braznell,	Pittsburgh & Erie Coal Co.,	Spring,	Gravity,		s 15,000	1,300 coal	1
Brier Hill,	Brier Hill Coke Co.,	Four Mile Run, General Water Co.	Gravity,		w 235,000 s (40,000)	910 coke 1,250 coal	1
Dawson,	Brown & Cochran,	Pond (7 acres),	Gravity,	100 (100 pop.)	s 500 c 24,000	365 coal 170 coke	1
Dunbar,	The American Manganese Mfg. Co.	Dunbar Water Supply Co.,	(desc. under Dunbar, Sect. No. 19)		(700,000)		
East Millsboro,	Hustead-Semans Coal & Coke Co.	Monongahela River,	Pumped,		s & c600,000	365 coal 176 coke	1
Elm Grove,	W. J. Rainey (coke),	Trotter Water Co. Wells (aux.)		(10,000)	s (32,800) c (42,800)	605 coal 400 coke	1
Fairbank,	The Struthers C. & C. Co.,	Struthers reservoir. General Water Co. (aux.)	Pumped,		s & c200,000	535 coal 425 coke	1
Gans,	United Connellsville Coke Co. (Crystal plant)	Small stream,	Gravity,		s 10,000b	400 coal	1
		Georges Creek,	Pumped,		c 80,000b	260 coke	
Helen,	Atlas Coke Co.,	Stream, 3 wells,	3 reservoirs, total 15,000,000 gallons		640 H.P.	660 coal 525 coke	1
Herbert,	Connellsville Central Coke Co.	(New Salem W. Co. See descrip. Herbert, Sec. No. 19)			150,000	1,300 coal 620 coke	1

LaBelle,	LaBelle Coke Co.,	Monongahela River,	Pumped,		175,000	675 coal 360 coke	1
Low Phos & Searight,	Connellsville Central Coke Co.	Hibbs Water Co. (See descrip. Low Phos., Sec. No. 19)			s 25,000 c 100,000	490 coal 510 coke	1
McClelland,	Puritan Coke Co.,	Brown's Run. Trotter Water Co.	Pumped,		c 16,000 s (16,000)	460 coke 570 coal	1
Masontown,	Consolidated Connellsville Coke Co.	Monongahela River,	Pumped,		s&c1,000,000	2,770 coal 1,780 coke	1
	Bessemer Coal & Coke Co. (Griffin No. 1 and No. 2)	Monongahela River,	Pumped,		s & c300,000	1,180 coal 920 coke	1
Menallen Township,	Lincoln Coal & Coke Co.,	Menallen Water Co. (See descrip. Lincoln, Sec. No. 19)		10,000 (1,000 pop.)	s 50,000 c 200,000	1,320 coal 890 coke	1
	Prospect Coal & Coke Co. (Solon works)	Trotter Water Co.,			s & c(40,000)	128 coal 79 coke	1
Messmore,	South Fayette Coke Co. (Fretts works)	Brown's Run,	Gravity, 4,000,000 gal. res.		c 40,000	280 coal 180 coke	1
Moyer,	W. J. Rainey (Grace coke wks.)	Mounts Creek,	Pumped,	5,100 (205 pop.)	s 33,000 28,500	355 coal 230 coke	1
Mt. Braddock,	W. J. Rainey (coke),	Wood's Run,	2,000,000 gal. res.,	23,625 (945 pop.)	s 109,400 86,250	885 coal 540 coke	1
New Salem,	Fayette Coke Co. (Shamrock works)	2 drilled wells,	Pumped,		s 8,700 c 130,000	600 coal 465 coke	1
	Thomson Connellsville Coke Co.				2,400 H.P.	2,760 coal 1,660 coke	2
Oliver,	Oliver & Snyder Steel Co.,	The South West W. Co.,			(800,000)	3,090 coal 2,040 coke	1
Orient,	Orient Coke Co.,	General Water Co., 7,000,000 gal. res. (aux.)			s & c(200,000)	1,250 coal 910 coke	1
Outcrop,	Rich Hill Coke Co.,	Rich Hill Water Co.,			s & c(16,250)	280 coal 210 coke	1
Republic,	Republic Iron & Steel Co.,	Mine. General Water Co.,	Pumped,		w (100,000) s	975 coke 1,500 coal	1
Royal,	W. J. Rainey (coke),	Rowes Run,	Pumped from 27,000,000 gal. res.	20,250 (890 pop.)	s 102,000 139,500	1,000 coal 620 coke	1
Searight,	Taylor Coal & Coke Co.,	Hibbs Water Co., Salt Lick Creek (emergency)	40,000,000 gal. res.,		s 50,000 c 200,000	1,600 coal 975 coke	1
Simpson,	Union Connellsville Coke Co.	Mine,	Pumped,		s (15,000)	360 coal	1
		Dunlap Creek,	Pumped,		c 80,000	280 coke	
Star Junction,	Washington Coal & Coke Co.	Washington and Crab Apple Runs	4 reservoirs total 95,245,000 gallons	37,500 (1,500 pop.)	s 350,000 w 300,000	4,680 coal 2,070 coke	3
	Eckard Coal & Coke Co.,	Wash. C. & C. Co.,		1,400 (60 pop.)	*(40 H.P.)	144 coal 116 coke	1
Tower Hill,	Tower Hill Connellsville Coke Co. (No. 1 & No. 2)	General Water Co.,		7,000	s (345,000) c (324,000)	2,160 coal 1,330 coke	1
Uledi,	W. J. Rainey (Revere wks.),	Jennings Run,	5,000,000 gal. res.,	28,375 (1,135 pop.)	s 90,500 w & c172,500	1,410 coal 910 coke	1

INDUSTRIAL WATER SUPPLIES (COAL AND COKE COMPANIES) SECTION NO. 19—Continued

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
Vanderbilt,	W. J. Rainey (Paul coke wks.)	Dickerson Run,	Gravity,	10,860 (430 pop.)	s 80,000 w & c 48,400	540 coal 350 coke	1
		Youghiogheny River,					
Waltersburg,	Waltersburg Coke Co.,	Stream,	Gravity,		s & c 65,000	520 coal	
	Edna works,	Wells,	Pumped,			325 coke	
Fayette & Westmoreland Counties—							
Smithfield,	Whyel Coke Co.: Thomas mine,	Drilled wells,	Pumped,	2,000 (350 pop.)	s 5,000 c 143,000	1,100 coal 310 coke 325 coke	4
Whitney,	Ellen No. 1 & No. 2 mine,						
Yukon,	Yukon mine,						
Somerset County—							
Althouse,	The Consolidation Coal Co.,	(See Althouse, Sec. No. 19),		5,000b (200 pop.)	s 7,000	400 coal	1
Hagevo,	Shade Coal Mining Co.,	Spring,	Gravity,	2,000 (250 pop.)	1,200	490 coal	1
Humbert,	Huff Coal Co. (See Humbert Vil., Sec. No. 19)			14,000 (360 pop.)	6,000		1
Meyersdale,	The Consolidation Coal Co.,	Casselman River,	Pumped to two 50,000 gal. tanks		s 105,000	1,500 coal	6
		Drilled well,	Pumped to 30,000 gallon tank	9,000 (350 pop.)			
	Keystone Coal Co.,				*(250 H.P.)	305 coal	2
Milford Township,	The Consolidation Coal Co.,	Wilson Creek,	Gravity,	9,000b (350 pop.)	s 5,000	390 coal	2
Pine Hill,	The Consolidation Coal Co.,	Drilled well,	Pumped to 8,000 gallon tank		s 13,000	750 coal	2
		3 springs,	Gravity,	9,000b (360 pop.)			
Washington County—							
Allenport,	The Vesta Coal Co.: Mine No. 1,	Monongahela River,	Pumped,	1,500 (500 pop.)		285 coal	1
California,	Mine No. 3,	Monongahela River,	Pumped,		s 1,300	820 coal	1
California,	Mine No. 4,	Monongahela River,	Pumped,		s 162,000	5,650 coal	1
Charleroi,	Carnegie Coal Co.,	Small run. Tri-Cities Water Co. (aux.)	Pumped,		s 25,000	1,110 coal	1

Cokeburg,	Ellsworth Collieries Co.,	So. Fork Pigeon Cr. 11,000,000 gal. stor. reservoir —	Stor. reservoir 17,000,000 gals., tanks 165,000 gals.	90,000 (4,500 pop.)	s 578,000 w & c450,000	6,900 coal 1,170 coke	4
Ellsworth,	Ellsworth Collieries Co.,	Pigeon Creek 25,000,000 gal. storage res.	Dist. reservoir 1,500,000 gals., tanks 150,000 gals.				
Denbo,	Reliance Coke Co.,	Monongahela River,	Pumped,		s & c150,000	100 coal 30 coke	1
Fredericktown,	The Vesta Coal Co., Mine No. 5	Monongahela River,	Pumped,	56,000 (1,700 pop.)	s 197,000	2,940 coal	1
	Clyde Coal Co.,	Monongahela River,	Pumped,	600 (20 pop.)	19,400	830 coal	1
Huston Run,	Diamond Coal & Coke Co.,	Monongahela River,	Pumped,	7,100 (250 pop.)	s 14,100	1,740 coal	1
Manifold,	Youghiogheny & Ohio Coal Co., Mines No. 1 & No. 2	Manifold Run, Drilled well,	Pumped,		s 100,000	1,750 coal	2
Marianna,	Pittsburgh-Buffalo Co. (See Marianna, Sec. No. 19)	Marianna Water Co.,		(300,000)	s (360,000) w&c(125,000)	2,090 coal 360 coke	1
Millsboro,	Bessemer Coke Co.,				*(720 H.P.)	410 coal 130 coke	1
Roscoe,	Vesta Coal Co., Mine No. 2,	Monongahela River,	Pumped,		s 32,500	490 coal	1
Star Mine,	Star Coal Co.,	Mingo Creek,	Pumped,		s 5,000	770 coal	1
West Brownsville,	Diamond Coal & Coke Co.,	Monongahela River,	Pumped,	6,600	s 59,100	1,380 coal	1
West Brownsville Jct.,	Warner-Leonard Coal Co.,	Brownsville Water Co.,		1,000b	s (4,000)	570 coal	1
Westmoreland County—							
Acme,	W. J. Rainey (coke),	Mt. Pleasant Water Co., (See descrip., Sec. No. 19)		(10,250)	s (28,000) (42,500)	630 coal 415 coke	1
Boyer & Marion,	Mt. Pleasant Coke Co.,	Veteran Water Co.,			100,000	1,130 coal 750 coke	1
	Marion Coke Co.,	Veteran Water Sup. Co.,					
Greensburg,	New Alexandria Coke Co.,	Tub Mill Run,	Pumped,		*(325 H.P.)	1,800 coal	4
Hempfield Township,	Keystone Coal & Coke Co.:						
	Greensburg No. 4 mine,	2 small cisterns,	Pumped,		s 1,100	89 coal	1
	Sewickley Mine,	Moore's Run, Shoemaker stream,	Pumped from 3,000,000 gal. and 16,000,000 gal. reservoirs to collieries	35,000 (700 pop.)	s 95,000	1,630 coal	1
	Arona mine,	Drilled wells,		18,000 (400 pop.)	s 40,000	740 coal	1
	Madison mine,	Little Sewickley Creek (emergency)		7,000 (260 pop.)	s 25,000	340	1
	Hempfield mine No. 1,	Westmoreland W. Co.,		1,660	s (60,000)	900 coal	1
	Hempfield mine No. 3,	Westmoreland W. Co.,		(480)		290 coal	1
	Crows Nest mine,	Westmoreland W. Co.,		(12,000)		1,615 coal	1
	Carbon mine,	Westmoreland W. Co.,		(3,100)	s (22,350) (18,500)	1,525 coal 95 coke	1
	Seaboard shaft mine,	Westmoreland W. Co.,		(800)	s (74,000)	65 coal	1
	Greensburg No. 1 mine,	Westmoreland W. Co.,		(500)		285 coal	1
	Greensburg No. 2 mine,	Westmoreland W. Co.,		(6,070)	s (41,220)	1,175 coal	1
	Greensburg No. 3 mine,	Westmoreland W. Co.,			s (9,600)	465 coal	1

INDUSTRIAL WATER SUPPLIES (COAL AND COKE COMPANIES) SECTION NO. 19—Continued

Place	Company	Source	Method	Consumption (gallons per day) Domestic	Consumption (gallons per day) Industrial	Daily amount of product short tons	Number of collieries supplied
Herminie,	Ocean Coal Co.,	Howell's Run trib. of Lit. Sewickley Cr.	Pumped,		s 180,000	3,680 coal	2
Moween,	Keystone Coal Co.,				*450 H.P.	710 coal	1
Pleasant Unity,	Bessemer Coke Co., Humphreys plant,	2 streams, 4 drilled wells,	Pumped,		s & c100,000	280 coal 220 coke	1
Sewickley Township,	Keystone Coal & Coke Co., Keystone shaft mine,	Drilled wells, Little Sewickley Cr., Andrews Run,	Pumped,	8,000 (900 pop.)	s 165,000	1,520 coal	1
	Claridge mine,	Bushy Run Creek, Drilled wells, Westmoreland Water Co.,	Pumped,		s 20,000	720 coal	1
Welty,	Clare Coke Co.,	Sewickley Creek,	Pumped,		s & c 75,000	385 coal 270 coke	1
Yukon,	The Youghiogheny & Ohio Coal Co. (Osborne mines Nos. 1 & 2)	Small run, Drilled wells,	Pumped to two 50,000 gal. tanks		s 100,000	2,770 coal	2
	H. C. Frick Coke Co.,	Mt. Pleasant W. Co.,		(121,500)	s (519,800) c (1,119,500)	15,500 coal 9,700 coke	17
		Sewickley Water Co.,		(50,630)	s (249,570) c (424,080)		
		Standard Water Co.,		19,630 (785 pop.)	s 57,060 c 152,000		
		Private,		53,700	s 152,700 c 483,400		
Total from private systems,				676,610	11,127,310		

*Capacity of boilers
bEstimated
sWater for steam purposes
cWater for quenching coke
wWater for washing coal

ALTHOUSE (BROTHERS VALLEY TWP.), SOMERSET COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 200a

LOCATION

Southern central Somerset County, in valley of Buffalo Creek, tributary of Casselman River, 6 miles north of Meyersdale borough; on Berlin Branch of Baltimore and Ohio R. R.

INDUSTRIES

Consolidation Mine No. 11, of Consolidation Coal Co., a Maryland corporation.

WATER SUPPLY

Private supply of Consolidation Coal Co.

SOURCE AND COLLECTION

A 10-inch drilled well, 217 feet deep, in southern part of village, 175 feet from creek, near power house; water raised by 25 g. p. m. Deming deep well pump, through 4-inch force main, 1,375 feet to two storage tanks, combined capacity, 7,600 gallons, at elevation 85 feet above well. Water medium hard.

DISTRIBUTION

By gravity through 4-inch pipe; pressure, 25 pounds; 3 fire hydrants.

CONSUMPTION

Supply to 200 people; 6 yard hydrants. No means of measuring consumption; assuming 10 gallons per capita, would be 2,000 gallons daily, all domestic.

BELLE VERNON AND NORTH BELLE VERNON BOROUGHS AND GIBSONTOWN AND PRICEDALE VILLAGES (ROSTRAVER TWP.), WESTMORELAND AND FAYETTE COUNTIES.

BELLE VERNON WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Belle Vernon,	2,372	471	
North Belle Vernon,	1,522	712	4,400a
Pricedale,			
Gibsontown,			

LOCATION

Belle Vernon in extreme northwestern corner of Fayette County, and adjacent to North Belle Vernon in extreme southwestern Westmoreland County, along Monongahela River; on Pittsburgh & Lake Erie R. R. and Webster, Monessen, Belle Vernon and Fayette City Street Ry. Suburban residential section for Charleroi and Monessen.

WATER SUPPLY

Belle Vernon Water Co., incorporated 1908 as merger of following companies.

Name	Inc.	Incorporated for
Belle Vernon Water Co.,	1894	Belle Vernon Boro., Fayette County
Red Water Co.,	1907	Washington Twp., Fayette County
Blue Water Co.,	1907	N. Belle Vernon Boro., Westmoreland County
Yellow Water Co.,	1907	Rostraver Twp., Westmoreland County

Works built in 1895 by Belle Vernon Water Co.

SOURCE AND COLLECTION

Monongahela River; intake and pumping station about 200 feet south of Belle Vernon borough line; two 8-inch intake pipes 50 feet into river from pump well; water forced through 10-inch main 1,990 feet long to 1,000,000 distributing reservoir on river bluff, just outside of southeastern corner of Belle Vernon, at elevation 350 feet above pumping station.

Pumping equipment one 1,250,000 gallon steam driven pump used for auxiliary purposes and 1,150,000 gallon gas engine driven pump. Water soft.

DISTRIBUTION

By gravity through 8-inch and 6-inch mains. A fire line extends to Gibsontown, Westmoreland County, 1 mile northwest of North Belle Vernon; pressures 90 to 160 pounds. Distributing mains as follows:

Size (inches),	8	6	4	3	2	1	Total
Length (miles),	0.5	3.1	4.7	0.6	0.3	0.1	9.3

Forty-four fire hydrants, 4-inch.

CONSUMPTION

Supply to 3,900 people; 735 taps, 45 are double service; 696 meters. Average daily consumption 109,600 gallons, 55% domestic and 45% industrial.

INDUSTRIAL SUPPLIES

Gibson Distillery Co. and the American Window Glass Co. have private systems.

BERLIN BOROUGH, SOMERSET COUNTY

BERLIN WATER COMPANY

Population 1910 census, 1,336; increase since 1900, 306. Estimated 1915 population, 1,400b.

LOCATION

Eastern central Somerset County, on divide between Casselman River and Stony Creek, about 5 miles west of summit of Allegheny Mountains; connected with Baltimore & Ohio R. R. at Garrett by branch line.

INDUSTRIES

Agriculture; cream factory, planing mill, pulp factory and grist mill.

WATER SUPPLY

Berlin Water Co., incorporated 1901 for Berlin borough; works built in 1903.

SOURCE AND COLLECTION

Five springs at headwaters of Buffalo Creek, tributary of Casselman River, at Garrett; 500,000 gallon reservoir at springs, 4 miles east of borough.

Auxiliary supply in dry seasons from Deeters Run, in Upper Juniata Sub-basin. Pumping station 7 miles northeast of borough; 90,000 gallons daily; 4-inch force main to reservoir at springs. Reported capacity of springs in fall of 1908, 7,000 gallons per day, and of run, 30,000.

DISTRIBUTION

By gravity through 10-inch pipe, reducing to 8-inch; pressure 110 pounds.

CONSUMPTION

Supply to 900 people; 212 domestic and 3 industrial taps. Average daily consumption 40,000 gallons. No means of measurement.

BOYER AND MARION (MT. PLEASANT TWP.), WESTMORELAND COUNTY

VETERAN WATER COMPANY
VETERAN WATER SUPPLY COMPANY

LOCATION

Central southern Westmoreland County, along Boyer Run, near junction with Sewickley Creek; on Pennsylvania R. R. and West Penn Rys.

INDUSTRIES

Two hundred coke ovens of Mt. Pleasant Coke Co. at Boyer and twenty ovens of Marion Coke Co. at Marion.

WATER SUPPLY

Veteran Water Co. and Veteran Water Supply Co., incorporated 1905 for Mt. Pleasant Township and Hempfield Township respectively. Works built 1907.

SOURCE AND COLLECTION

(1) Small tributary of Boyer Run, above Boyer; intake and pumping station near mouth.

(2) Auxiliary supply in dry seasons from Township Line Run, tributary of Sewickly Creek, 1 mile west of villages; intake near mouth; 72,000 gallon pump forces water to reservoir.

CONSUMPTION

Total average daily consumption 100,000 gallons, all industrial.

BRADDOCK BOROUGH, ALLEGHENY COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 19,357; increase since 1900, 3,703. Estimated 1915 population, 22,000a.

LOCATION

Southeastern Allegheny County, along north bank of Monongahela River, east of Pittsburgh; on Pittsburgh & Lake Erie R. R., Baltimore & Ohio R. R. and Pittsburgh Rys. About two-thirds of built-up section at elevation 25 to 45 feet above river and one-third from 45 to 120 feet above river.

WATER SUPPLY

Municipal works built in 1884.

SOURCE AND COLLECTION

Monongahela River; two 16-inch drilled wells, 65 feet deep, along river bank, receive over 50% river water through intervening sand and gravel. Pumping equipment an air compressor, a 5,000,000 gallon pump with two 2,500,000 gallon pumps in reserve, and four 250 hp. water tube boilers. Water pumped through 16-inch force main 14,163 feet to 2,500,000 gallon settling basin on hillside, thence flows to 9,000,000 gallon distributing reservoir nearby.

DISTRIBUTION

By gravity through 16-inch main; pressures, 80 to 120 pounds. Distributing mains as follows:

Size (inches),	16	10	8	6	4	3	Total
Length (miles),	0.2	0.1	1.8	6.5	2.3	0.5	11.4
Per cent.,	2.0	1.0	16.0	57.0	20.0	4.0	100

One hundred and eleven fire hydrants.

CONSUMPTION

Supply to 20,000 people; 2,000 taps with 600 meters; 5 industrial. Average daily consumption, 3,500,000 gallons; measured by pump displacement; 90% domestic and 10% industrial.

COST AND REVENUE

Total cost of works, $287,897; annual operating expenses, $23,220; gross revenue, $43,141.

BROWNSVILLE, SOUTH BROWNSVILLE AND WEST BROWNSVILLE BOROUGHS, FAYETTE AND WASHINGTON COUNTIES

BROWNSVILLE WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Brownsville,	2,323	772	3,000
South Brownsville,	3,943	2,138	4,500
West Brownsville,	2,036	1,294	2,500

LOCATION

Northwestern Fayette County, along Monongahela River, West Brownsville being across river in Washington County; on Monongahela Division of Pennsylvania R. R., Pittsburgh & Lake Erie R. R. and Western Penn Rys. Built-up portion along river about 20 feet above river, elevation 755, extending to low hills, elevation 1,180.

INDUSTRIES

Coal, coke and railroad center.

WATER SUPPLY

Brownsville Water Co., incorporated 1901 as merger of following companies:

Name	Inc.	Incorporated for
Brownsville Water Co.,	1892	Brownsville Boro., Fayette County
Bridgeport Water Co.,	1892	Bridgeport Boro., Fayette County
Consolidated Water Co.,	1896	Washington and Fayette Counties

SOURCE AND COLLECTION

Monongahela River; intake and pumping station at upper end of South Brownsville; water pumped from filter crib intake through 12-inch force main 3,000 feet to 4,500,000 gallon distributing reservoir on hill just southwest of South Brownsville borough line. If necessary water may also be pumped to 600,000 gallon reservoir just west of Brownsville borough line. Pumping equipment two 2,500,000 gallon Wilson-Snyder triplex pumps, auxiliary 1,000,000 Porter pump and two boilers. Water varies from soft to medium hard.

DISTRIBUTION

By gravity through two 8-inch mains; pressures 40 to 150 pounds; distributing mains 3 miles; 44 fire hydrants, 6-inch.

CONSUMPTION

Supply to 10,000 persons; 1,586 taps, 497 meters, 16 industrial. Average daily consumption 1,000,000 gallons, 80% domestic and 20% industrial, measured by pump displacement.

Supplies Hamberger and Perry distilleries, Brownsville Brewing Co., houses of Peoples Coal Co., Brownsville Coal and Coke Co., Connellsville Coal and Coke Co., Kinder mine of Warner-Leonard Coal Co., Pennsylvania R. R. yards, and an auxiliary supply to houses of H. C. Frick Coke Co.

INDUSTRIAL

Thompson distillery, H. C. Frick Coke Co., Peoples Coal Co., Brownsville Construction Co. and Pittsburgh & Lake Erie R. R. have private water systems, using Monongahela River. Century Coal Co. and Reliance Coke Co. have private systems.

BRUSH RUN (MT. PLEASANT TWP.), WESTMORELAND COUNTY

BRUSH RUN WATER COMPANY

LOCATION

Central southern Westmoreland County, on Brush Run, 6 miles east of Mt. Pleasant.

WATER SUPPLY

Brush Run Water Co., incorporated 1900 for Mt. Pleasant Township. Supply from springs, distributed by gravity through 2 miles of 4-inch pipe; pressures 0 to 80 pounds. Water soft.

Supply to 15 persons; 7 taps. Stated average daily consumption 1,000 gallons, all domestic. No means of measurement.

CALIFORNIA BOROUGH, WASHINGTON COUNTY

CALIFORNIA WATER COMPANY

Population, 1910 census, 2,230; increase since 1900, 221. Estimated 1915 population, 2,700a.

LOCATION

Southeastern Washington County, along Monongahela River, at mouth of Pike Run; on Pennsylvania R. R. Built-up portion on high river bank, sloping gently to Third Avenue, where slope begins to increase.

INDUSTRIES

Coal mining; mercantile and provision plants. Seat of Southwestern State Normal School.

WATER SUPPLY

California Water Co., incorporated 1899 for California, Coal Center, Elco, Roscoe, Stockdale and Allenport boroughs, and townships of East Pike Run and Allen. In 1907 company purchased property and franchises of Coal Center Water Works Co., incorporated 1907 for Coal Center Borough.

SOURCE AND COLLECTION

Monongahela River; intake and pumping station 0.5 mile south of borough line; elevation of pool full river, 734.5. A 15-inch suction extends 60 feet into river, with inlet 3 feet below pool at full stage. At pumping station a centrifugal pump raises raw water through 6-inch discharge to 48,000 gallon settling basin; flows through mechanical filters, two units having 200,000 gallons capacity each, to 48,000 gallon clear water basin; pumped through 10-inch force main

to distributing system. Pumping equipment 400,000 gallon centrifugal pump and 350,000 Deming triplex pump, both belt-connected to 50 hp. Westinghouse gas engine. Water medium hard.

As this company is owned by stockholders of Brownsville Water Co., plans are being made to abandon California intake and connect system to Brownsville Water Co.'s supply.

DISTRIBUTION

By pumping direct to system, with 10-inch connection to 200,000 gallon equalizing standpipe on hillside west of borough; pressures 50 to 130 pounds.

CONSUMPTION

Supply to 1,500 people; 400 taps. Average daily consumption 100,000 gallons; 10,000 gallons industrial; measured by pump displacement.

PRIVATE SUPPLY

Southwestern State Normal School has private system. Water pumped to reservoir from Monongahela River, with emergency connection to water company's main.

CALUMET, MAMMOTH AND UNITED (MT. PLEASANT TWP.), WESTMORELAND COUNTY

SEWICKLEY WATER COMPANY
(H. C. Frick Coke Co.)

Estimated 1915 population, 2,025.

LOCATION

Central southern Westmoreland County, in valley of Sewickley Creek, near headwaters; on Pennsylvania R. R., Sewickley Branch of Pittsburgh Division.

INDUSTRIES

Coal mines and 1,020 coke ovens of H. C. Frick Coke Co.

WATER SUPPLY

Sewickley Water Co., incorporated 1910 for Mt. Pleasant Township, owned by H. C. Frick Coke Co. Works operating previous to incorporation.

SOURCE AND COLLECTION

Right branch of Sewickley Creek; 31,000,000 gallon reservoir 0.5 miles east of Calumet and 2 miles above junction of right and left branches. Water from two drilled wells near creek, 1 mile above reservoir, pumped into creek during dry seasons. Water flows through 16-inch main 3,364 feet to pumping station at Mammoth.

Drilled well 550 feet deep at Mammoth; water pumped to tanks for domestic use; supply furnished by coke company.

DISTRIBUTION

By pumping direct to system through 10-inch force main 5,690 feet long; pressures 40 to 100 lbs. Coke company has private water lines from this force main.

CONSUMPTION

Supply to 2,025 people. Average daily consumption 724,280 gallons, 673,650 gallons industrial 50,630 gallons domestic; measured by pump displacement.

CARNEGIE AND TERRITORY SOUTH OF PITTSBURGH, ALLEGHENY COUNTY

SOUTH PITTSBURGH WATER COMPANY
(American Waterworks & Elec. Co.)

	Population 1910 census	Increase since 1900	Estimated 1915
*Bridgeville Borough,	1,983	(Inc. 1901)	2,100
Carrick Borough,	6,117	(Inc. 1904)	9,000
*Carnegie Borough,	10,009	2,679	11,000
*Crafton Borough,	4,583	2,656	5,500
*Dormont Borough,	1,115	(Inc. 1909)	2,100
*Greentree Borough,	1,143	465	1,250
Hays Borough,	1,888	(Inc. 1901)	2,000
*Heidelberg Borough,	1,848	(Inc. 1903)	2,050
*Ingram Borough,	2,037	(Inc. 1902)	3,100
Knoxville Borough,	5,651	2,140	6,600
Mt. Oliver Borough,	4,241	1,946	5,200
Munhall Borough,	5,185	(Inc. 1901)	6,100
Rosslyn Farms Borough,	----------	(Inc. 1913)	600
St. Clair Borough,	5,640	(Inc. 1904)	6,700

	Population 1910 census	Increase since 1900	Estimated 1915
*Thornburg Borough,	230	(Inc. 1909)	350
*Westwood Borough,		(Inc. 1913)	1,000
Whitaker Borough,	1,547	(Inc. 1904)	2,000
Baldwin Township,	8,230		11,000
Bethel Township,	1,611		1,800
Chartiers Township,	5,250		6,500
Collier Township,	4,211		5,200
Mt. Lebanon Township,		(Inc. 1912)	2,000
Mifflin Township,	8,076		10,500
Robinson Township,	3,129		4,500
Scott Township,	5,737		6,000
Snowden Township,	1,971		2,500
18th Ward, Pittsburgh,	17,994		19,500
19th Ward, Pittsburgh,	23,482		26,000
20th Ward, Pittsburgh,	18,648		20,500
Total,	148,547		182,650

*Boroughs are in Section 20

LOCATION

Southern central Allegheny County, south of Ohio River, south and west of Monongahela River and east of Chartiers Creek; on Pennsylvania R. R., Baltimore & Ohio R. R., West Side Belt R. R., Wabash, Pittsburgh Terminal Ry., and Pittsburgh Rys. Elevations 875 to 1,280.

INDUSTRIES

Coal mines, railroads, ice plants, steel and iron mills, machine shops and foundries, manufacturing and miscellaneous industries.

WATER SUPPLY

South Pittsburgh Water Co., incorporated for Bridgeville Borough by American Water Works and Guarantee Co. (now American Waterworks and Electric Co.), which held, through stock ownership, 42 other water charters in this territory. Works started 1895 by St. Clair Water Co., which was sold to Chartiers Valley Water Co., in turn sold to South Pittsburgh Water Co. in 1904.

Federal Water Co., incorporated 1900 for South Fayette Township, owns pipe lines to City Poor Farms at Marshalsea, and rents same to South Pittsburgh Water Co.

Whitaker Water Co., incorporated 1913 for Whitaker Borough, operated as a subsidiary of South Pittsburgh Water Co.

SOURCE AND COLLECTION

Monongahela River; intake and Becks Run pumping station on west bank of river, opposite Hazelwood, in Pittsburgh; timber filter crib near east bank connected to pump well by 24-inch pipe; a masonry

intake pier connected by 36-inch pipe; emergency 24-inch pipe from well to river; 12 to 15 feet of water maintained over intake crib by United States Government Dam No. 1, a short distance below. Water pumped through two parallel lines 24-inch force mains 10,000 feet southwest up valley of Becks Run to Hays Mine mechanical filter plant, at edge of Carrick Borough. Pumping equipment of Becks Run station:

Number and type	Date of manufacture	Rated daily capacity	Pipe connections	
			Suction (inches)	Discharge (inches)
One Worthington high duty compound duplex pump,	1895	5 m.g.	16	16
One Worthington triple vertical duplex pump,	1895	3 m.g.	16	16
One Heisler duplex pump,	1904	3 m.g.	24	14
One E. P. Allis triplex pump,	1898	8 m.g.	24	18
Six Heine water tube boilers,	1894-1903	150 hp.ea.		
One McNaull water tube boiler,	1904	320 hp.		

Filter plant consists of 4,000,000 gallon settling basin, 14 filter units, each 1,000,000 gallons, and 400,000 gallon clear water basin. A pumping station here pumps water through 30-inch force main, branching into smaller lines to places served. Pumping equipment at filter plant consists of:

Number and type	Date of manufacture	Rated daily capacity
Three R. D. Wood horizontal duplex condensing triple expansion pumps,	1905	5 m. gals.
Four Babcock & Wilcox water tube boilers,	1905-1911	300 hp. each

DISTRIBUTION

Connection made at following standpipes:

Location	Elevation	Capacity (gallons)
One at Lincoln Place,	1,326	760,000
One at Mt. Oliver,	1,380	550,000
Two at White Hall-Baldwin Twps.,	1,331	655,000
One at West Homestead,	1,068	636,000
One at Sheraden,	1,189	329,000
One reservoir at Crafton,	1,039	3,000,000

Reservoir supplies to parts of Crafton, Ingram and Carnegie.

Pressures and fire hydrants as follows:

Place	Average	Maximum	Minimum	Fire hydrants
West Homestead Borough,	105	120	90	2
Bridgeville Borough,	115	172	77	25
Carrick,	100	215	56	45
Carnegie,	132	211	58	64
Crafton,	77	210	38	62
Dormont,	75	102	55	44
Greentree,	156	156	156	1
Hays Borough,	238	256	145	18
Heidelberg,	140	173	81	13
Ingram,	84	164	28	35
Knoxville,	101	115	73	52
Mt. Oliver,	110	161	72	36
St. Clair,	115	167	75	23
Thornburg,	158	202	120	7
Whitaker Borough,	135	193	110	21
Baldwin Township,	100	1[illegible]0	100	1
Chartiers,	98	185	40	36
Mt. Lebanon,	103	133	73	2
Mifflin,	110	176	50	62
Scott,	96	188	53	13
Snowden,	148	150	147	4
18th ward,	105	150	85	41
19th ward,	120	227	56	107
20th ward,	130	216	70	63

Distributing mains as follows:

Size (inches),	36	30	24	20	18	16	14	12	Total
	10	8	6	4	3	2½	2	1 and smaller	
Length (miles),	0.1	0.2	4.0	7.9	3.9	0.2	0.01	18.6	
	15.5	28.8	114.0	55.2	0.05	0.5	56.8	1.4	307.1
Per cent.,	(	1.0	)	3.0	1.0	(	6.0	)	
	5.0	10.0	37.0	18.0	(	19.0		)	100

CONSUMPTION

	Population supplied	Number of taps		Meters	Average daily consumption	
		Domestic	Industrial		Total	Industrial
Exclusive of Whitaker Boro.,	124,000	16,489	48	13,932	7,500,000	1,000,000
Whitaker Boro.,	408	68	----------	68	20,400	----------

HISTORICAL

South Pittsburgh Water Co., controlled by the American Water Works and Electric Co., controls the following charters by purchase:

Name	Incorporated for	Inc.	Date of purchase
Banksville Water Co.,	Union Twp.,	1904	1904
Beech Cliff Water Co.,	Baldwin Twp.,	1904	1904
Bethel Water Co.,	Bethel Twp.,	1904	1904
Carnegie Water Co.,	Carnegie Boro.,	1904	1904
Collier Water Supply Co.,	Collier Twp.,	1904	1904
Farmers Water Co.,	Mifflin Twp.,	1904	1904
Germania Water Co.,	Mt. Oliver Boro.,	1904	1904
Goodwin Water Co.,	Upper St. Clair Boro.,	1904	1904
Greentree Water Co.,	Greentree Boro.,	1904	1904
Hays Water Co.,	Hays Boro.,	1904	1904
Heidelberg Water Co.,	Heidelberg Boro.,	1904	1904
Highland Water Co.,	Crafton Boro.,	1904	1904
Hill Top Water Supply Co.,	Knoxville Boro.,	1904	1904
Lafayette Water Co.,	Chartiers Twp.,	1904	1904
Lower St. Clair Water Co.,	Lower St. Clair Twp.,	1904	1904
Mechanics Water Co.,	West Homestead Twp.,	1904	1904
Montooth Water Co.,	Montooth Boro.,	1904	1904
Niagara Water Co.,	Sheraden Boro.,	1904	1904
Scotia Water Supply Co.,	Jefferson Twp.,	1904	1904
Shirland Water Co.,	Scott Twp.,	1904	1904
Snowden Water Supply Co.,	Snowden Twp.,	1904	1904
Stowe Water Co.,	Stowe Twp.,	1904	1904
Superior Water Co.,	Ingram Boro.,	1904	1904
Thornburg Water Co.,	Robinson Twp.,	1904	1904
West Liberty Water Co.,	West Liberty Boro.,	1904	1904

Leased in 1904 Chartiers Valley Water Co., incorporated 1896 for district south and west of Ohio and Monongahela rivers, which company purchased the St. Clair Water Co., incorporated 1892 for Lower St. Clair Township. The St. Clair Water Co. purchased the property and franchises of following:

Name	Incorporated for	Inc.	Date of purchase
Beltzhoover Water Co.,	Beltzhoover Boro.,	1892	1893
Knoxville Water Co.,	Knoxvillle Boro.,	1892	1893
Lebanon Water Co.,	Mansfield Boro.,	1893	1893
Putnam Water Co.,	Chartiers Boro.,	1893	1893

COKE REGIONS FAYETTE AND WESTMORELAND COUNTIES

TROTTER WATER COMPANY
(H. C. Frick Coke Co.)

Villages	Township	Est. 1915 pop.	Villages	Township	Est. 1915 pop.
Adelaide,	Dunbar,	570a	Kyle	Georges,	445a
Bitner,	Dunbar,	440a	Lambert,	German,	1,015a
Brownfield,	South Union,	725a	Leckrone,	German,	995a
Buffington,	Menallen,	1,005a	Leisenring,	Dunbar,	925a
Bute,	North Union,	990a	Leith,	South Union,	330a
Collier,	Georges,	670a	Lemont Fce.,	North Union,	1,130a
Continental No. 1,	South Union,	620a	Monarch,	Dunbar,	920a
Continental No. 2,	Georges,	635a	Newcomer,	German,	*
Continental No. 3,	Georges,	635a	Oliphant Fce.,	Georges,	575a
Crossland,	Dunbar,	70a	Pechin,	Dunbar,	*
Davidson,	Connellsville,	380a	Phillips,	North Union,	670a
Dearth,	German,	460a	Prospect,		250a
Edenborn,	German,	1,015a	Puritan,	German,	505a
Emery,	German,	*	Ralph,	German,	50a
Evans,	North Union,	450a	Ronco,	German,	875a
Fayette,	Dunbar,	*	Shoaf,	Georges,	845a
Ferguson,	Dunbar,	*	Summit,	Upper Tyrone,	50a
Filbert,	Redstone,	850a	Thomas,	Georges,	*
Footedale,	German,	1,060a	Trotter,	Dunbar,	755a
Fretts,	German,	*	Valley,	Upper Tyrone,	50a
Gates,	German,	750a	Wynn,	Georges,	420a
Hutchinson,	South Union,	*	White,	Upper Tyrone,	60a
Juniataville,	Dunbar,	470a	Yorkrun,	Georges,	945a
			Youngstown,	North Union,	365a
					23,910a
(Other places including those with * above),					9,090
					33,000

*No information.

LOCATION

Coke regions through central part of Fayette County, extending from Monongahela River along western slope of Chestnut Ridge to Youghiogheny River, and to Scottdale borough, in Westmoreland County; on Pennsylvania R. R., Baltimore & Ohio R. R., Pittsburgh & Lake Erie R. R., Monongahela R. R., and West Penn Rys.

INDUSTRIES

Coal mines and coke ovens.

WATER SUPPLY

Trotter Water Co., owned and operated by H. C. Frick Coke Co. and incorporated 1905 as a merger of following companies:

Name	Inc.	Incorporated for
Trotter Water Co.,	1888	Dunbar Twp., Fayette County
Youghiogheny Water Co.,	1881	Fayette and Westmoreland Counties
Youghgahela Water Co.,	1905	(Merger) Fayette County

The Youghgahela Water Co. is a merger of following companies:

Name	Inc.	Incorporated for
Fairchance Water Co.,	1887	Georges Twp., Fayette County
Huron Water Co.,	1899	German Twp., Fayette County
Lemont Water Co.,	1905	North Union Twp., Fayette County
Redstone Water Co.,	1887	South Union Twp., Fayette County

The original three systems, Trotter Water Co., Huron Water Co. and Youghiogheny Water Co., united to form one system by construction completed in 1906 (but ordinarily water from Monongahela River does not mingle with Youghiogheny water), being connected by 2 miles 6-inch pipe through coal mine from Continental No. 3 to Continental No. 2.

SOURCE AND COLLECTION

(1) Monongahela River; old intake of Huron Water Company. Pumping station on east bank, at mouth of Browns Run, in German Township; pumping equipment, two 3,000,000 gallon Wilson-Snyder duplex pumps. Water pumped northward through 3,700 feet of 18-inch force main to standpipe, capacity 848,232 gallons.

(2) Youghiogheny River; old intake Trotter Water Co. Pumping station on west bank Dunbar Township, opposite South Connellsville. Intake tunnel 5 feet wide and 8 feet deep leads to pump well, whence water is pumped through 24-inch force main to 3,500,000 gallon reservoir on hill about 0.25 mile west and 434 feet above pump foundations. Pumping equipment two Wilson-Snyder duplex pumps capacity of each 4,000,000 gallons daily.

(3) Youghiogheny River; old intake of Youghiogheny Water Company. Pumping station on north bank, above mouth of Jacobs Creek, at Broad Ford, about 1.5 miles below Connellsville. Water pumped through 12-inch force main 2.5 miles north along Jacobs Creek to 1,135,000 gallon Tintsman reservoir at Summit Mine. Pumping equipment two 1,000,000 gallon single plunger pumps.

(4) Tributary of Redstone Creek near headwaters: 10,000,000 gallon reservoir at Brownfield 2.5 miles south of Uniontown; watershed area 3.75 square miles.

(5) Shutes Run, tributary of Cove Run, tributary of Redstone Creek; 17,000,000 gallon reservoir 2.5 miles east of Uniontown; watershed area 1.04 square miles.

(6) Tributary of Coal Lick Run, tributary of Redstone Creek; two reservoirs, total capacity 21,000,000 gallons, 3 miles southwest of Uniontown; watershed area 0.46 square miles.

DISTRIBUTION

From (1) by gravity from standpipe through 18-inch main, with 6-inch branches to Ronco, Gates, Edenborn and Lambert, dividing into (a) 12-inch line, reducing to 10-inch, passing through McClellandtown to Leckrone, with 8-inch branch passing through or near Puritan, Ache Junction, and Messmore to Continental No. 3; and (b) 10-inch line, reducing to 8-inch, to boundary between German and Menallen townships, near New Salem and Buffington, with 6-inch branch to Footedale and 8-inch branch to boundary between German and Menallen townships, on a line between Footedale and Low Phos; also by gravity from standpipe through 12-inch main, reducing to 8-inch, to boundary between German and Luzerne townships, with 8-inch and 6-inch branches to Lambert and Ralph.

From (2) by gravity from reservoir through 24-inch main southwesterly, reducing to 20-inch, 16-inch, 14-inch, 12-inch and 8-inch, passing through or near Dunbar, Pechin, Ferguson, Mt. Braddock, Percy, Youngstown, Lemont and Yorkrun to Shoaf, with 8-inch, 6-inch and 4-inch branches to Mt. Braddock, Youngstown, Lemont, Phillips, Crossland, Leith, Continental No. 1, Continental No. 2, Brownfield, Oliphant Furnace, Wynn, Fairchance, Kyle, Collier and Yorkrun; also by gravity from reservoir through 18-inch main northwesterly about 2 miles, with 6-inch branch to Trotter, dividing into (a) 12-inch line, reducing to 10-inch and 8-inch through Leisenring to Bute, with 8-inch and 6-inch branches to Monarch and a 10-inch branch, reducing to 8-inch through Juniataville to boundary between Dunbar and Franklin townships, near Elm Grove; and (b) 8-inch line,increasing to 10-inch and reducing to 8-inch and 6-inch, to Adelaide, with 6-inch branch along Clay Pike northeasterly from Trotter to Connellsville borough line, and 6-inch branch to Broad Ford (crossing under Youghiogheny River), thence a 4-inch branch to Davidson (crossing Youghiogheny River on West Yough Railroad bridge) and a 3-inch branch, reducing to 2½-inch, and 1½-inch, in a general northeasterly direction from Broad Ford, about 2.5 miles through a farming district known as the Narrows.

A 6-inch connecting line through mine from Continental No. 2 to Continental No. 3 by which water from distributing system (2) may be delivered into a part of distributing system (1), used only in emergencies.

From (3) by gravity through about 2 miles of 12-inch main to Scottdale, with 6-inch and 4-inch branches to Henry Clay, Rist, White, Morgan, Summit, Valley and Sheet Mills at Old Meadow and Scottdale.

From (4) by pumping for an emergency supply in vicinity of Brownfield.

From (5) by gravity through 8-inch and 6-inch lines to Lamont, with emergency connection to 8-inch gravity line to Phillips.

From (6) by pumping for emergency supply through 8-inch and 6-inch lines to Continental No. 2, Continental No. 1 and Redstone mines. Distributing mains:

Size (inches),	24	20	18	16	14	12	10	8	6	4	3 and smaller	Total
Length (miles),	7.27	0.91	5.15	4.31	1.22	13.91	7.46	22.00	12.02	3.12	3.54	80.91
Per cent.,	9	1	6	5	2	17	9	27	15	4	5	100

Pressures 6 to 240 pounds. All fire hydrants owned by industrial companies supplied.

CONSUMPTION

Supply to 30,095 people, 27 domestic and 65 industrial connections, all metered, to 41 operations of H. C. Frick Coke Co., and 593 domestic and 38 industrial connections, also metered, to various other coke companies at Broad Ford, Dunbar, Pechin, Percy, McClellandtown, Thomas, Scottdale and other places in district covered by mains.

Total average daily consumption 8,238,000 gallons; about 10% domestic; measured by pump displacement; 6,174,000 gallons of this furnished to H. C. Frick Coke Co. operations and 2,091,000 gallons to the various other taps.

Supplies 28,000 gallons daily to municipal water works of Fairchance Borough, partial supply to American Sheet and Tin Plate Co. at Scottdale and during extremely dry weather to Uniontown Water Company.

For details of places supplied and consumption to different operations of H. C. Frick Coke Co., see special tabulation under Industrial Supplies, this section.

H. C. FRICK COKE COMPANY

Operations of H. C. Frick Coke Co. in Fayette and Westmoreland counties obtain supplies largely from water companies, and also from private sources. The following tables indicate the general scheme of supply to the various collieries:

SUPPLY ENTIRELY FROM WATER COMPANIES

Number of collieries	County	Water Company	Described under	Section No.
25	Fayette,	Trotter Water Co.,	Coke Regions,	19
6	Westmoreland,	Mt. Pleasant Water Co.,	Mt. Pleasant,	19
2	Westmoreland,	Sewickley Water Co.,	Calumet,	19
1	Westmoreland,	Puritan Water Co.,	Baggaley,	18
2	Westmoreland,	Standard Water Co.,	Greensburg,	19
2	Westmoreland,	Latrobe Water Co.,	Latrobe,	18

SUPPLEMENTARY SUPPLIES OF OPERATIONS PARTLY SUPPLIED BY WATER COMPANIES

(a) Partly by Trotter Water Co. (See Coke Regions, this section)

Place	Township	County	Section No.	Private source of supply
Adelaide,	Dunbar,	Fayette,	19	Youghiogheny River
Buffington,	Menallen,	Fayette,	19	Water pumped from mine, used for ovens only
Davidson,	Connellsville,	Fayette,	19	Youghiogheny River
Gates,	German,	Fayette,	19	Monongahela River
Juniata,	Dunbar,	Fayette,	19	Branch of Bute Run
Leisenring No. 1,	Dunbar,	Fayette,	19	Spring in air shaft, used only for ovens
Leisenring No. 2,	Dunbar,	Fayette,	19	Branch of Rankins Run
Leith,	South Union,	Fayette,	19	Redstone Creek, 1,250,000 gallon reservoir
Oliphant,	Georges,	Fayette,	19	Two drilled wells, 295 and 195 feet deep
Ronco,	German,	Fayette,	19	Spring in air shaft
Trotter,	Dunbar,	Fayette,	19	Branch of Opossum Run
Wynn,	Georges,	Fayette,	19	Drilled well, 187 feet deep; reported flow 432,000 gallons daily

(b) Partly by Mt. Pleasant Water Co. (See Mt. Pleasant, this section)

Hecla No. 1,	Mt. Pleasant,	Westmoreland	19	Branch of Boyer Run, 12,960,000 gallon impounding reservoir
Hecla No. 3,	Mt. Pleasant,	Westmoreland	19	Boyer Run, 10,670,000 gallon impounding reservoir

(c) Partly by Sewickley Water Co. (See Calumet, this section)

Mammoth,	Mt. Pleasant,	Westmoreland	19	Drilled well, 550 feet deep; for domestic use

(d) Partly by Franklin Twp. Water Co. (See Smock, this section)

Colonial No. 1,	Franklin,	Fayette,	19	Allen Run, 30,000,000 gallon reservoir; two drilled wells for domestic use

OPERATIONS SUPPLIED ENTIRELY FROM PRIVATE SOURCES

Place	Township	County	Section number	Population	Source of supply	Total average daily consumption (gals.)
Alverton,	E. Huntingdon,	Westmoreland,	19	545	Buffalo Run and drilled wells	165,620
Bridgeport,	Luzerne,	Fayette,	19	485	Monongahela River,	97,765
Brinkerton,	Mt. Pleasant,	Westmoreland,	19	380	Branch of Sewickley Creek	121,610
Coalbrook,	Connellsville & Bullskin	Fayette,	19	205	Whites Creek,	58,215
Colonial No. 3,	Redstone,	Fayette,	19	525	Wash Water Run,	148,888
Colonial No. 4,	Redstone,	Fayette,	19	530	Colvin Run,	162,985
Hecla No. 2,	Mt. Pleasant,	Westmoreland,	19	725	Branch of Sewickley Creek, 11,850,000 gallon res.	195,526
Mutual,	Mt. Pleasant,	Westmoreland,	19	495	Brinker Run and drilled wells, 3,130,000 gallon reservoir.	165,255
Palmer,	German,	Fayette,	19	------	Monongahela River,	--------
Sarah,	Luzerne,	Fayette,	19	------	Monongahela River,	--------
Hostetter,*	----------	----------	----	720	Left branch of Nine Mile Run; 21,430,000 gal. reservoir	504,014
Whitney,*	Unity,	Westmoreland,	18	625		

*Hostetter-Connellsville Coke Co. operation

The production and consumption of the H. C. Frick Coke Co. is shown in the table of industrial water supplies for coal and coke companies in Sections Nos. 18 and 19. Total average daily consumption for all operations is about 12,000,000 gallons; 61% for general purposes at coke ovens, 31% for steam and 8% for domestic purposes.

CONFLUENCE BOROUGH, SOMERSET COUNTY

CITIZENS WATER COMPANY OF CONFLUENCE
PRIVATE SUPPLY

Population 1910 census, 890; increase since 1900 19. Estimated 1915 population, 1,000a.

LOCATION

Southwestern Somerset County, at junction of Casselman River and Laurel Hill Creek with Youghiogheny River; on Baltimore & Ohio R. R. and Western Maryland Ry.

INDUSTRIES

Tannery and lumber mill.

WATER SUPPLY

Citizens Water Co. of Confluence, incorporated 1904 for Confluence borough.

Private system of V. N. Black, A. N. Tissue and D. L. Miller, installed 1908.

CITIZENS WATER COMPANY OF CONFLUENCE

SOURCE AND COLLECTION

Draketown Run, tributary of Youghiogheny River, 2 miles below Confluence; intake 2.5 miles above mouth and 3 miles north of borough. Water led by canal a few hundred feet to 1,500,000 gallon storage reservoir. Water soft.

Auxiliary supply, in case of fire, from tannery, which pumps water from Laurel Hill Creek.

Holds water rights on Moon Run, held in reserve.

DISTRIBUTION

By gravity through 3.5 miles of 6-inch main; possible pressure of 185 pounds, reduced to 40 and 60 pounds; 2.5 miles distributing mains, 17 fire hydrants.

CONSUMPTION

Supply to 600 people; 171 taps; 15 domestic and 6 industrial taps metered. Average daily consumption 350,000 gallons, 123,000 domestic and 127,000 industrial; measured by decrease in reservoir.

PRIVATE SUPPLY

Source of supply springs, rising in mountain north of borough; supply in dry seasons from water company. Distribution by gravity through 1-inch pipe; pressure, 100 pounds. Average daily consumption, 1,500 gallons to 45 people; 9 taps.

CONNELLSVILLE CITY, SOUTH CONNELLSVILLE BOROUGH, FAYETTE COUNTY

THE CONNELLSVILLE WATER COMPANY

(American Water Works & Electric Co.)

	Population 1910 census	Increase since 1900	Estimated 1915
Connellsville,	12,845	4,153	15,034x
South Connellsville (Inc. 1910),			2,000b

LOCATION

Northern Fayette County, on both sides of Youghiogheny River; on Pennsylvania R. R., Baltimore & Ohio R. R., Pittsburgh & Lake Erie R. R., Wstern Maryland Ry. and West Penn Rys. Built-up portion on two hills, elevations 890 to 1,151. (City datum, deduct 15.93 to correct to U. S. G. S.)

INDUSTRIES

Coal and coke operations, Connellsville Machine and Car Co. works, Baltimore & Ohio classification yards and offices.

WATER SUPPLY

The Connellsville Water Co., incorporated 1883 for Connellsville Borough and vicinity. In 1892 purchased rights and franchises of New Haven Water Co., incorporated 1884 for New Haven Borough and vicinity, now part of city on west side of river. Company owned and operated by American Water Works and Electric Co. of New York. Works built in 1883 as gravity supply and pumping station added in 1885, location changed in 1898.

SOURCE AND COLLECTION

(1) Youghiogheny River; intake, pumping station and filter plant on east bank of river at mouth of Laurel Run, 2.5 miles south of center of city. Water raised from 16-inch intake in river to 290,000 gallon settling basin, thence flows through mechanical filters, three units, total capacity 1,750,000 gallons, to 110,000 gallon clear water reservoir. Low service pumping equipment a 2,500,000 gallon Worthington and a 3,000,000 gallon Blake pump, 70 hp. McNeil, 80 hp. McEwen and 70 hp. Erie boilers. Water pumped from clear water reservoir through 16-inch force main to distributing system. High

service pumping equipment, 2,500,000 gallon Worthington pump, one 3,225,000 gallon Epping Carpenter pump and a 3,000,000 gallon Stillwell-Smith-Vaile pump which can be used for low service also.

(2) McCoy Run, tributary of Youghiogheny River, near center of borough; intake reservoir, capacity 5,000,000 gallons, 2 miles above mouth and east of borough, at elevation 1,208; watershed area 2 square miles.

(3) Breakneck Run, tributary of Mounts Creek, about 2 miles north of borough; 15,000,000 gallon storage reservoir, 3.5 miles northeast of borough, at elevation 1,210; watershed area 3.5 square miles. This supply not in use since damage to reservoir in 1912.

DISTRIBUTION

From (1) by pumping direct to system forms main supply.

From (2) by gravity through 10-inch line, increasing to 12-inch, parallel to 8-inch Breakneck reservoir line.

From (3) by gravity through 8-inch, increasing to 10-inch where it parallels McCoy Run line. Supplies high portions of borough through distribution system valved off from rest.

Pressure 20 to 45 pounds. Distribution mains as follows:

Size (inches),	16	12	10	8	6	4	3 & smaller	Total
Length (miles),	1.2	2.9	2.4	6.7	7.6	5.5	16.3	42.6
Per cent.,	3	7	6	16	18	13	38	100

One hundred and twenty-two fire hydrants, 5¼-inch.

CONSUMPTION

Supply to 16,800 people; 3,025 taps, 572 metered. Estimated average daily consumption 1,675,000 gallons, 175,000 industrial. No means of measurement.

DAWSON BOROUGH, FAYETTE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 848; increase since 1900, 23. Estimated 1915, 900a

LOCATION

Central northern Fayette County, along north bank of Youghiogheny River; on Baltimore & Ohio R. R. Range of elevations in built-up portion 100 feet.

INDUSTRIES

Residential community for coal and coke industry.

WATER SUPPLY

Municipal works installed in 1898.

Small private system in western part of borough, owned by Charles F. Boyd, serves a few houses from spring nearby.

SOURCE AND COLLECTION

(1) Two drilled wells, 140 and 160 feet deep, on top of river bluff within borough. An electrically driven pump at each well lifts water into a 500,000 gallon distributing reservoir nearby. Water soft.

(2) Two drilled wells at abandoned driving park, 1,500 feet north and beyond borough line. A third well can be used if needed by installing pump. An electrically driven 43,200 gallon Hill deep well pump at each well lifts water through 4-inch force mains, uniting 250 feet from one well and 550 feet from other, continuing as one 4-inch main 1,800 feet west to distributing reservoir, which receives supply from other wells. Water soft.

DISTRIBUTION

By gravity through 6-inch main 3,000 feet long. Average pressures 125 to 130 pounds; 2.1 miles distributing mains, 4-inch to 10-inch, 65% 6-inch; 28 fire hydrants, 4-inch.

CONSUMPTION

Supply to 350 people; 80 metered taps. Average daily consumption 8,000 gallons, all domestic.

COST AND REVENUE

Total cost of works about, $15,000; annual gross operating expenses, $1,400; gross revenue, $1,300.

DUNBAR BOROUGH, FAYETTE COUNTY

DUNBAR WATER SUPPLY COMPANY
(The American Manganese Manufacturing Co.)

Population 1910 census, 1,970; increase since 1900, 308. Estimated 1915, 2,000b.

LOCATION

Northern central Fayette County, along Dunbar Creek, 3 miles south of Connellsville; on Pennsylvania R. R., Baltimore & Ohio R. R. and West Penn Rys.

INDUSTRIES

The American Manganese Manufacturing Co., formerly the Dunbar Furnace Co.; Semet-Solvay coke ovens and coal mines, sand mill and glass works.

WATER SUPPLY

Dunbar Water Supply Co., incorporated 1900 for Fayette and Westmoreland counties in all districts not covered by other charters. Works built 1792 by Dunbar Furnace Co.

SOURCE AND COLLECTION

Dunbar Creek, tributary of Youghiogheny River, above Connellsville; four small storage reservoirs, 2.5 miles southwest of Dunbar, in narrow valley.

Auxiliary supply in dry seasons from five drilled wells along creek, about 1 mile below reservoir; pumped by air-lift.

DISTRIBUTION

By gravity, through 14-inch main, to distributing reservoir on hill above furnace.

CONSUMPTION

Supply to about 500 people in company's houses. Stated average daily consumption 2,120,000 gallons, about 25,000 domestic; the remainder industrial to Semet-Solvay Coal and Coke Co., Pennsylvania Wire Glass Co., and locomotives, mine, sand plant and furnace plant of The American Manganese Manufacturing Co.

DUQUESNE BOROUGH, ALLEGHENY COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 15,727; increase since 1900, 6,691. Estimated 1915, 16,000.

LOCATION

Southeastern Allegheny County, along west bank of Monongahela River; on Pennsylvania R. R. and Pittsburgh Rys.

INDUSTRIES

Carnegie steel works.

WATER SUPPLY

Municipal works built 1896.

SOURCE AND COLLECTION

From 17 drilled wells along river bank, in northeastern part of borough; in two groups, river wells and pumping station wells. River wells, along river bank about 15 feet from low water, 12-inch diameter and average 50 feet deep. Of nine pumping station wells, 100 feet from low water line, eight are 12-inch in diameter and one 10-inch; average depth 65 feet. Water lifted by air compressor to 220,000 gallon clear water well. Ingersoll-Rand air compressor, 50 hp., and emergency compressor connected to 35 hp. electric motor; air lift increased capacity of wells 100%. Combined maximum capacity 1,900,000 gallons. Two 1,500,000 gallon Worthington pumps lift water through 14-inch force main with two 10-inch branches, direct to distributing system. Water medium hard.

DISTRIBUTION

By pumping direct to system, with 14-inch connection to 500,000 gallon standpipe on hill in extreme northwestern part of borough; Pressures 0 to 185 pounds; 21 miles distributing mains, 4-inch to 10-inch; 130 fire hydrants, 4-inch.

CONSUMPTION

Supply to 16,000 people; 1,750 metered taps. Flush tanks and drinking fountains not metered. Average daily consumption 850,000 gallons, 92% domestic and 8% industrial; measured by Venturi meter.

COST AND REVENUE

Total cost of works (when built), $75,000; annual operating expenses, $20,000; gross revenue, $8,000.

INDUSTRIAL SUPPLY

Carnegie steel works has private system.

EAST McKEESPORT BOROUGH, ALLEGHENY COUNTY

EAST McKEESPORT WATER COMPANY

Population 1910 census, 2,118; increase since 1900, 1,245. Estimated 1915, 2,500b

LOCATION

Southeastern Allegheny County, adjoining Wilmerding on the south, in Turtle Creek valley; on Pittsburgh Rys. Residential district for Wilmerding.

WATER SUPPLY

East McKeesport Water Co., incorporated 1896 for East McKeesport Borough. In 1907 purchased property and franchises of South Versailles Water Co., incorporated 1901 for North Versailles Township, and Melrose Water Co., incorporated 1906 for Wilmerding Borough.

SOURCE AND COLLECTION

Five springs at head of small stream, tributary of Turtle Creek from south, at east end of Wilmerding; springs just south of Wall Borough; combined flow about 450,000 gallons daily. Water piped to 10,000,000 gallon reservoir formed by dam across ravine; surface water diverted and reservoir receives spring water only.

Auxiliary supply purchased from McKeesport Municipal water works, where water is pumped into 200,000 gallon standpipe, at elevation 1,230, in East McKeesport.

DISTRIBUTION

By gravity from distributing reservoir and standpipe. Supplies fire hydrants in Wilmerding also.

CONSUMPTION

Supply to 2,500 people. Stated average daily consumption 30,000 gallons from East McKeesport system and 64,000 gallons purchased from McKeesport; all domestic.

EXPORT BOROUGH, WESTMORELAND COUNTY

CONSUMERS WATER COMPANY OF FRANKLIN TOWNSHIP
(Westmoreland Coal Company)

LOCATION

Western Westmoreland County, near headwaters of Turtle Creek; terminus of branch line of Pennsylvania R. R.

WATER SUPPLY

Consumers Water Co. of Franklin Township, incorporated 1903 for Franklin Township by Westmoreland Coal Co. Source of supply South Fork of Turtle Creek. Storage reservoir just above junction with Turtle Creek, 1 mile southeast of borough. Consumption all industrial.

FAIRCHANCE BOROUGH, FAYETTE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,760; increase since 1900, 541. Estimated 1915, 2,000a.

LOCATION

Southwestern Fayette County, near headwaters of Georges Creek, a tributary of Monongahela River; on Pennsylvania R. R., Baltimore & Ohio R. R., West Penn Rys. and Fairchance & Smithfield traction line. Built-up portion on western slope of Chestnut Ridge, whose summits are 1,500 feet above borough.

INDUSTRIES

Coal mining and coke manufacturing; glass works and fire brick works.

WATER SUPPLY

Municipal works, consisting of supply and distributing mains from standpipe of Trotter Water Co., in northern part of borough, built in 1909.

SOURCE AND COLLECTION

Water purchased from Trotter Water Co. (See description under Coke Regions of Fayette County.)

DISTRIBUTION

An 8-inch supply main 2,900 feet in length from 1,459,000 gallon standpipe to distributing system. Distributing system:

Size (inches),	8	6	4	Total
Length (miles),	1.15	1.09	1.19	3.43

Thirty fire hydrants.

CONSUMPTION

Supply to 600 people; 150 taps. Average daily consumption 28,237 gallons, all domestic; measured by meter.

COST AND REVENUE

Total cost of works, $20,000; annual operating expenses, $2,400; gross revenue, $2,500.

FAYETTE CITY BOROUGH, ARNOLD CITY AND BROWNSTOWN VILLAGES (WASHINGTON TWP.), FAYETTE COUNTY

FAYETTE CITY WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Fayette City,	2,065	410	2,300b
Arnold City,	1,000	----------	1,000b
Brownstown,	----------	----------	100b

LOCATION

Northwestern corner of Fayette County, along east bank of Monongahela River; on Pittsburgh & Lake Erie R. R., Arnold City 1.25 miles northeast of Fayette City and on Downers Run.

INDUSTRIES

Coal mining in vicinity.

WATER SUPPLY

Fayette City Water Co., incorporated 1906 as merger of Fayette City Water Co., incorporated 1903 for Fayette City Borough, and Washington Township Water Co., incorporated 1905 for Washington Township. Works built 1904 by Fayette City Water Co. before merger.

SOURCE AND COLLECTION

Seven drilled wells, 8-inch diameter and 33 to 37 feet deep, in borough and about 150 feet from river; river water filters into wells through intervening sand and gravel. Water pumped through 10-inch force main into 1,000,000 gallon distributing system on top of bluff 1 mile east; one 432,000 gallon Gould pump.

DISTRIBUTION

By gravity through 6-inch main.

CONSUMPTION

Supply to 2,000 people; 250 taps. Average daily consumption 100,000 gallons; measured by pump displacement. Supply to private main of Pittsburgh Coal Co. at Arnold City.

FREDERICKTOWN AND NEWTOWN (EAST BETHLEHEM TWP.), WASHINGTON COUNTY

FREDERICKTOWN WATER COMPANY

Estimated 1915 population: Fredericktown, 400a, Newtown, 100a.

LOCATION

Extreme southeastern Washington County, along Monongahela River; on Pennsylvania R. R.

INDUSTRIES

Bituminous coal mine of Clyde Coal Co.

WATER SUPPLY

Fredericktown Water Co., incorporated 1903 for East Bethlehem Township, by stockholders of Clyde Coal Co.

SOURCE AND COLLECTION

Monongahela River; intake and pumping station at upper end of Fredericktown. Water pumped through 2-inch pipe 550 feet to distributing tank. Pumping equipment Wagner duplex pump and 15 hp. boiler. Water soft.

DISTRIBUTION

By gravity; pressures 50 to 55 pounds; 0.8 mile distribution mains; 1 fire hydrant.

CONSUMPTION

Supply to 100 people in Newtown through six street hydrants and to 400 people in Fredericktown through 19 taps. Average daily consumption 21,000 gallons, all domestic; estimated by tank measurement.

GARRETT BOROUGH, SOMERSET COUNTY

GARRETT WATER COMPANY

Population 1910 census, 848; increase since 1900, 360. Estimated 1915, 1,200a.

LOCATION

Southern central Somerset County, along Casselman River, at mouth of Buffalo Creek; on Baltimore & Ohio R. R., Western Maryland Ry. and terminus of Pennsylvania & Maryland Street Ry. Range of elevation in built-up section is 60 feet.

INDUSTRIES

Coal mining.

WATER SUPPLY

Garrett Water Co., incorporated 1903 for Garrett Borough.

SOURCE AND COLLECTION

(1) Piney Run, small tributary of Casselman River, 1 mile below Garrett; 1,000,000 gallon reservoir 1 mile north of borough; watershed area, 5 square miles. Hypochlorite treating plant 200 feet below reservoir, on supply line.

(2) Bixie Run, tributary of Casselman River, opposite borough, used for emergency supply; 1,000,000 gallon reservoir 0.5 mile below its two branches and 1 mile southwest of borough; watershed area 6 square miles. All water soft.

(3) Two drilled wells near Piney Run being installed to augment supply; one 67 feet deep and the other 168 feet.

DISTRIBUTION

From (1) by gravity through 6-inch main 4,700 feet, reducing to 4-inch 500 feet.

From (2) by gravity through 10-inch main 300 feet northeast, reducing to 8-inch 500 feet and to 6-inch 4,200 feet, continuing under river to distributing system; pressures 60 to 85 pounds; distributing mains, 1.9 miles 2-inch to 6-inch.

CONSUMPTION

Supply to 1,200 people; 150 taps. Stated average daily consumption 100,000 gallons, 75% domestic and 25% industrial. No means of measurement.

GLADEHURST (SOMERSET TWP.), SOMERSET COUNTY

GLADEHURST WATER COMPANY

Estimated 1915 population, 200a.

LOCATION

Central Somerset County, near headwaters of Coxe Creek, tributary of Casselman River, and just outside of limits of Somerset Borough; latter on Pennsylvania R. R. and branch of Baltimore & Ohio R. R.

INDUSTRIES

Agriculture; residential section for Somerset Borough.

WATER SUPPLY

Gladehurst Water Co., incorporated 1906 for Somerset Township.

SOURCE AND COLLECTION

Two springs rising about 1 mile east of Somerset. Water collected in 11,000 gallon well nearby and pumped by 36,000 gallon pump through 3-inch pipe 1,600 feet south to 64,000 gallon distributing reservoir, 150 feet higher than pump. Boiler capacity 12 hp. Water medium hard.

DISTRIBUTION

By gravity through 4-inch main 5,000 feet to settlement; pressures 20 to 85 pounds; 10 fire hydrants.

CONSUMPTION

Supply to 150 people; 30 taps, all metered. Average daily consumption 2,000 gallons, all domestic.

GLASSPORT, ELIZABETH, WEST ELIZABETH, CLAIRTON, WILSON, DRAVOSBURG, TENTH WARD OF McKEESPORT CITY, AND OTTO VILLAGE (PORT VUE TWP.), ALLEGHENY COUNTY

MONONGAHELA VALLEY WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915 population
Glassport,	5,540	Incorp. 1902	5,600b
Elizabeth,	2,311	445	2,500b
West Elizabeth,	841	94	850b
Clairton,	3,326	Incorp. 1902	3,500b
Wilson,	1,108	Incorp. 1907	1,200b
Dravosburg,	1,895	Incorp. 1903	1,900b
Tenth ward, McKeesport,	2,625	----------	3,000b
Otto,	----------	----------	130b
Total,	----------	----------	18,680b

LOCATION

Southeastern Allegheny County, on both sides of Monongahela River, between Elizabeth Borough and McKeesport City; on Pennsylvania R. R., Pittsburgh & Lake Erie R. R., and Pittsburgh Rys.

INDUSTRIES

In Glassport, Severence Manufacturing Co. (spikes and rivets), Pittsburgh Steel Company (hoop and band department), Pittsburgh steel foundry, United States glass works, American axe and tool works, and Pollock shops Pittsburgh & Lake Erie R. R.

WATER SUPPLY

Monongahela Valley Water Co., incorporated 1897 for that portion of Allegheny County bounded north by Monongahela River and Turtle Creek, on east by eastern boundary line of county, on west by southern boundary line of Jefferson and Mifflin townships.

SOURCE AND COLLECTION

Monongahela River; intake, pumping station and filter plant at upper end of Elizabeth borough. Water pumped by low service pumps into two 100,000 gallon settling basins, thence to mechanical filters three 750,000 gallon units, to 100,000 gallon clear water basin; thence pumped direct to system. Pumping equipment one 3,000,000 gallon low-lift pump, two 3,000,000 gallon Worthington pumps and one 2,500,000 gallon Wilson-Snyder pump.

DISTRIBUTION

By pumping direct to system, with 16-inch main connecting to 1,000,000 gallon equalizing reservoir on high ground east of Patterson Village; 1,300,000 gallon reservoir at Elizabeth, ordinarily shut off from system, serves as emergency supply. From pumping station a 20 and a 12-inch main 3 miles along southern side of river to Patterson Village, opposite Clairton, where they are cross-connected: the 20-inch reduces to 16-inch, with 16-inch branch to equalizing reservoir; the 16-inch crosses river reduces to 12-inch and connects with other 12-inch at Clairton. A single 12-inch line continues to Wilson, crosses river at Glassport and continues to Tenth Ward of McKeesport, with 6-inch branch crossing river at Dravosburg.

A 500,000 gallon standpipe at Glassport kept filled with water for emergency supply for Glassport, Dravosburg and Tenth Ward.

CONSUMPTION

Supply to 14,000 people; 1,944 domestic and 20 industrial taps. Average daily consumption 1,500,000 gallons, 325,000 industrial; measured by pump displacement.

HISTORICAL

In 1898 the Monongahela Valley Water Co. purchased property and franchises of following:

Name of company	Inc.	Incorporated for
Elizabeth Water Co.,	1895	Elizabeth Borough
Jefferson & Mifflin Water Co.,	1896	District south and west of Monongahela River, bounded by lines of Baldwin, Snowden, and Union townships
Lincoln Water Co.,	1896	District between Monongahela and Youghiogheny Rivers, extending to county line and Forward township line

In 1896 the Elizabeth Water Co. purchased property and franchises of West Elizabeth Water Co., incorporated 1896 for West Elizabeth Borough.

GREENSBURG, IRWIN AND JEANNETTE BOROUGHS AND BOROUGHS AND VILLAGES IN VICINITY, WESTMORELAND COUNTY

WESTMORELAND WATER COMPANY

STANDARD WATER COMPANY
(H. C. Frick Coke Co.)

CONSUMERS WATER COMPANY OF NORTH HUNTINGDON TOWNSHIP
(Westmoreland Coal Co.)

NORTH IRWIN WATER COMPANY

District	Population 1910 census	Increase since 1900
Greensburg		
Greensburg Borough,	13,012	3,933
South Greensburg Borough,	1,748	1,048
Southwest Greensburg Borough,	2,127	1,296
Youngwood Borough,	1,881	Incorp. 1902
Carbon Village (Hempfield Twp.),		
Fosterville Village (Hempfield Twp.),		
Huff Village (Hempfield Twp.),		
Pleasant Unity Village (Unity Twp.),		
Jeannette		
Jeannette Borough,	8,077	2,212
Manor Borough,	1,039	355
Penn Borough,	1,048	285
Westmoreland City Village (North Huntingdon Twp.),		
Irwin		
Irwin Borough,	2,886	434
North Irwin Borough,	646	243

	Greensburg	Irwin	Jeannette
Estimated 1915 population,	24,000a	4,000a	13,000a
Range of elevations,	965 to 1,227	880 to 1,120	965 to 1,240

LOCATION

Territory in central western Westmoreland County; along main line of Pennsylvania R. R. from Greensburg, near headwaters of Jacks Run, tributary of Youghiogheny River, to Irwin, on Brush Creek, tributary of Turtle Creek, and from Greensburg to Youngwood; also on Pittsburgh, McKeesport & Greensburg R. R. and West Penn Rys.

INDUSTRIES

Coal mining and coke manufacturing; glass works and rubber works at Jeannette.

WATER SUPPLY

Westmoreland Water Co., incorporated 1886 for Ludwick Borough (now Sixth Ward, Greensburg), purchased in 1913 property and franchises of following companies:

Name	Inc.	Incorporated for
Westmoreland Water Co., of Unity Twp.,	1886	Unity Township
Westmoreland Water Co., of Hempfield Twp.,	1886	Hempfield Township
Derry Water Co.,	1887	Derry Borough
Westmoreland Water Co., of Greensburg Borough,	1886	Greensburg Borough
Irwin Water Co.,	1889	Irwin Borough
Penn Borough Water Co.,	1887	Penn Borough
Penn Township Water Co.,	1887	Penn Township
North Huntingdon Water Co.,	1887	No. Huntingdon Twp.

System of Derry Water Co. separate from others and is described under Derry Borough, Section No. 18. One of sources of supply is in Section No. 18.

Standard Water Co., incorporated 1900 for Unity Township by H. C. Frick Coke Co., furnishes industrial supply at Pleasant Unity Village.

Consumers Water Co. of North Huntingdon Township, incorportated 1900 for North Huntington Township, by Westmoreland Coal Co., furnishes industrial supply at Westmoreland City.

North Irwin Water Co., incorporated 1895 for North Irwin Borough; owned by Carruthers Estate, in Irwin Borough.

WESTMORELAND WATER COMPANY

SOURCE AND COLLECTION

(1) Nine Mile Run and its tributary, Armel Run (in Section No. 18), tributary of Loyalhanna Creek; Immel reservoir, capacity

177,000,000 gallons, on headwaters of Nine Mile Run, 5 miles south of Latrobe and 9 miles southeast of Greensburg, at elevation 1,422; watershed area, 0.5 square mile. Average daily flow 378,920 gallons; minimum flow practically nothing. Receives 18-inch pipe line from intake on Armel Run, 5,000 feet east of reservoir, and 16 and 18-inch line from intake on Sewickley Creek; watershed area of 1.45 square miles. Average daily flow of Armel Run 1,142,240 gallons; minimum 36,000 gallons.

(2) Sewickley Creek, tributary of Youghiogheny River; intake near source and 6,000 feet southwest of Immel reservoir; watershed area 1.05 square miles. Average daily flow 981,980 gallons; minimum of 24,000 gallons.

(3) Township Line, or Snails Run, tributary of Sewickley Creek; Unity reservoir, capacity 486,000,000 gallons, on headwaters, at elevation 1,280; watershed area 450 acres. Average daily flow 600,000 gallons. Water pumped from reservoir through 14 and 18-inch force mains into Dry Ridge distributing reservoir, capacity 2,000,000 gallons, 0.25 mile west, at elevation 1,300. Pumping equipment 3,000,000 gallon Worthington duplex pump and 30 hp. boiler.

(4) By agreement with Mountain Water Supply Co. of Pennsylvania R. R. in 1910 Westmoreland Water Co. allowed certain maximum and minimum daily amount of water from Indian Creek, to be paid for at certain rate, because of rights which Westmoreland Water Co. has on Indian Creek. Water taken from 30-inch main of Mountain Water Supply Co. at South Greensburg.

(5) Small tributary of Brush Creek, at Jeannette; Jeannette reservoir, capacity 76 000,000 gallons on small run 2.5 miles west of Greensburg; watershed area 323 acres. Several springs feed the reservoir, but the stream itself is diverted to pass around reservoir.

DISTRIBUTION

From (1) by gravity through 16 and 18-inch main to Immel reservoir.

From (2) by gravity through 14-inch pipe from Immel reservoir northwest, 9 miles, passing Unity reservoir; 6-inch branch extends to Whitney.

From (3) by gravity through 18-inch main west, 2.5 miles to South Greensburg, with 8-inch line south, 3 miles to Youngwood, and through 12-inch main northwest, 2.5 miles to Greensburg; 12-inch from South Greensburg to Greensburg and thence to Jeannette reservoir.

From (4) a 14-inch main extends northwest from connection at Huff, 3 miles to Jeannette reservoir.

From (5) by gravity through 14-inch main from Jeannette reservoir, extending through Jeannette, reducing to 12-inch through Penn and 10-inch through Manor and Westmoreland City, and connecting at Irwin with 1,400,000 gallon distributing reservoir.

Supply mains as follows:

Size (inches),	18	16	14	12	10	8	6	Total
Length (miles),	4.3	1.2	11.6	3.6	2.8	1.4	1.2	26.1

Pressures 20 to 140 pounds; fire hydrants Greensburg district 194, Irwin district 26, Jeannette 56, all 6-inch.

Distributing mains (in miles) as follows:

	Size (inches)							
	14	12	10	8	6	4	Under 4	Total
Greensburg District,	--------	3.5	1.0	4.9	14.0	13.7	3.5	40.6
Irwin District,	--------	--------	0.3	1.0	2.6	3.8	1.3	9.0
Jeannette District,	0.9	1.9	1.5	1.9	5.8	8.5	2.4	22.9
Total,	0.9	5.4	2.8	7.8	22.4	26.0	7.2	72.5
Per cent.,	1.0	7.0	4.0	11.0	31.0	36.0	10.0	100

CONSUMPTION

	Population supplied	Number of taps		Meters	Average daily consumption	
		Domes.	Indust.		Total (gals.)	Indust. (gals.)
Greensburg District,	24,000	3,558	395	3,953	970,000	708,000
Irwin District,	4,000	574	94	668	144,000	100,000
Jeannette District,	13,000	1,838	97	1,935	419,000	314,000
Total,	41,000	5,970	486	6,556	1,533,000	1,122,000

Measured by total of meter readings.

STANDARD WATER COMPANY

SOURCE AND COLLECTION

Small tributary of Sewickley Creek, above Pleasant Unity 24,982,000 gallon reservoir 1 mile east of village.

DISTRIBUTION

By gravity through 10-inch pipe to pumping station, there raised into three 75,000 gallon tanks at Marguerite plant of coke company.

CONSUMPTION

Average daily consumption, 200,000 gallons, entirely industrial, to 400 coke ovens and for boiler purposes. Domestic supply to 149 families furnished by Westmoreland Water Co.

CONSUMERS WATER COMPANY OF NORTH HUNTINGDON TOWNSHIP

Source of supply small tributary of Brush Creek, between Irwin and Westmoreland City; storage reservoir, 0.25 mile above mouth. Distribution by gravity to operations of Westmoreland Coal Co., at Westmoreland City. Supply entirely industrial.

NORTH IRWIN WATER COMPANY

Source of supply Tinker Run, tributary of Brush Creek, at Irwin; 5,000,000 gallon reservoir 1.5 miles above mouth and just outside of southern borough line; 6-inch gravity line to Crescent brewery, just outside of Irwin. Consumption entirely industrial.

HERBERT (REDSTONE TWP.), FAYETTE COUNTY

NEW SALEM WATER COMPANY
(Connellsville Central Coke Company)

Estimated 1915 population, 500a

LOCATION

Northwestern Fayette County, along Salt Lick Creek, 1 mile above mouth in Dunlap Creek, on Pennsylvania R. R.

INDUSTRIES

Connellsville Central Coke Co., 210 coke ovens.

WATER SUPPLY

New Salem Water Co., incorporated 1905 for Menallen Township, by Connellsville Central Coke Co., furnishes industrial supply to Coke Co. Domestic supply from private shallow wells. Water company owns reservoir in Menallen Township, while coke company owns pumps and distributing lines.

SOURCE AND COLLECTION

Small tributary of Salt Lick Creek, near village; watershed area 40 acres; 75,000,000 gallon reservoir, from which water is pumped through 6-inch force main to three 50,000 gallon tanks at plant; pump operated by air compressor. Water soft.

DISTRIBUTION

By gravity through 6-inch pipe; pressures 60 to 80 pounds.

CONSUMPTION

Supplies eight 150 hp. return tubular boilers in power house. Stated average consumption 150,000 gallons daily, all industrial. No means of measurement.

HOMESTEAD AND WEST HOMESTEAD BOROUGHS, ALLEGHENY COUNTY

MUNICIPAL WATER WORKS

	Population 1910 census	Increase since 1900	1913 population
Homestead,	18,713	6,159	25,000a
West Homestead,	3,009	(Incorp. in 1900)	

LOCATION

Southwestern Allegheny County, along south bank of Monongahela River, opposite eastern end of city of Pittsburgh; on Pennsylvania R. R., Pittsburgh & Lake Erie R. R., Pittsburgh Rys., and Homestead & Mifflin Street Rys. Built-up portion gently sloping 0.5 mile from river to steep slope, 1,500 feet to gentle slope.

INDUSTRIES

Homestead Steel Works of Carnegie Steel Co.

WATER SUPPLY

Municipal works owned by Homestead Borough installed in 1892.

SOURCE AND COLLECTION

Monongahela River, and drilled wells along bank which receive two-thirds of water from river; 18-inch intake pipe at upper end of borough extends 350 feet into river from pump well, thence down stream 1,200 feet to pier of Pittsburgh bridge. Pipe laid 2 feet below river bed and intake attached to pier with inlet 3 feet below low water. Sixteen 12-inch drilled wells, 60 to 66 feet deep, near pumping station, used if necessary. Approximate capacity of wells 288,000 gallons daily. Water treated with hypochlorite and pumped through 18-inch force main 7,500 feet to 2,500,000 gallon reservoir on hill at south end of borough. Pumping equipment one 4,000,000 gallon Epping-Carpenter pump, one 3,000,000 gallon Worthington pump and two 250 hp. water tube boilers. Water medium hard.

DISTRIBUTION

Two services, high and low, with check valve connection between them to maintain city pressure in high service district when elevated tank is empty.

High service district supplied by 14-inch main from 250,000 gallon steel tank adjacent to reservoir and 100 feet above it. Tank supplied by Turbine booster pump from low service line at reservoir.

Low service supplied by gravity through 14-inch main from reservoir. Pressures 60 to 130 pounds. Distributing mains:

Size (inches),	14	6	4	Total
Length (miles),	0.50	14.00	0.25	14.75

One hundred twenty-seven fire hydrants, 6-inch.

CONSUMPTION

Supply to 18,000 people; 2,235 taps, 17% metered. Average daily consumption 2,500,000 gallons, 99% domestic and 1% industrial; measured by pump displacement; 374 domestic meters show 42,000 gallons and 6 industrial meters show 15,000 gallons consumption daily.

COST AND REVENUE

Total cost of works, $300,000; annual operating expenses $14,900; gross revenue, $37,864.

INDUSTRIAL SUPPLY

Carnegie Steel Co. and Mesta Machine Co. have private systems.

HUMBERT (LOWER TURKEYFOOT TWP.), SOMERSET COUNTY

PRIVATE SUPPLY
(Huff Coal Company)

Estimated 1915 population, 360a

LOCATION

Southwestern Somerset County, along Laurel Hill Creek, tributary of Youghiogheny River; on Ursina & North Fork Ry., connecting with Baltimore & Ohio R. R. at Ursina Junction.

INDUSTRIES

Mining operations of Huff Coal Co.

WATER SUPPLY

Private system of Huff Coal Co., installed 1903.

SOURCE AND COLLECTION

Laurel Hill Creek; intake and pumping station in upper end of village. Water pumped through 4-inch force main to 50,000 gallon wooden tank on hill east of village. Pumping equipment 432,000 gallon Snow pump, steam furnished by locomotive of railroad. Water soft.

DISTRIBUTION

By gravity through 6-inch main; pressures 55 to 60 pounds, can be increased to 105 for fire protection; 2,500 feet distributing mains, 4-inch; 13 fire hydrants, 2-inch.

CONSUMPTION

Supply to 360 people; 80 taps. Average daily consumption 20,000 gallons, 14,000 domestic, and 6,000 industrial to railroad.

INDUSTRIAL SUPPLY

United Lumber Co. has private system.

LAYTON VILLAGE, FAYETTE COUNTY
(Railroad Supply)

PERRY WATER COMPANY

Estimated 1915 population, 300a

LOCATION

Northwestern Fayette County, along north bank of Youghiogheny River; on Baltimore & Ohio R. R.

WATER SUPPLY

Perry Water Co., incorporated 1896 for Perry Township by Baltimore & Ohio R. R. Co.

SOURCE AND COLLECTION

Stewarts Run, small tributary of Youghiogheny River, at Layton; 24,000,000 gallon reservoir at Layton from which water pumped into three 50,000 gallon tanks; watershed area 0.5 square mile. Pumping equipment No. 10 Blake pump and one old locomotive boiler. Water soft.

CONSUMPTION

Average daily consumption 220,000 gallons; used by locomotives of Baltimore & Ohio R. R.

LINCOLN (MENALLEN TWP.), FAYETTE COUNTY

MENALLEN WATER COMPANY
(Lincoln Coal & Coke Company)

Estimated 1915 population, 1,000a

LOCATION

Northwestern Fayette County, on small tributary of Redstone Creek; on Pennsylvania R. R.

INDUSTRIES

Four hundred coke ovens of Lincoln Coal & Coke Co. Production of coal 400,000 tons annually.

WATER SUPPLY

Menallen Water Co., incorporated 1902 for Menallen Township by Lincoln Coal & Coke Co.

SOURCE AND COLLECTION

Paines Run, small tributary of Jennings Run, tributary of Redstone Creek; 30,000,000 gallon storage reservoir 1.5 miles southeast of village; watershed area 1,000 acres. Water pumped through 8-inch force main 6,000 feet to 250,000 gallon distributing reservoir at plant. Pumping equipment a 600,000 gallon Laidlaw-Dunn-Gordon duplex pump and two 60 hp. return tubular boilers. Water medium hard.

DISTRIBUTION

By gravity through 8-inch main; pressures 60 to 90 pounds; 1,000 feet distributing mains; no fire hydrants.

CONSUMPTION

Supply to 1,000 people. Stated average consumption 250,000 gallons daily, 2% domestic and 98% industrial. No means of measurement.

Domestic supply from drilled wells with hand pumps.

LOW PHOS AND SEARIGHT (MENALLEN TWP.), FAYETTE COUNTY

HIBBS WATER COMPANY
INDUSTRIAL SUPPLY

Estimated 1915 population Low Phos, 300; Searight, 1,000

LOCATION

Northwestern Fayette County, on Salt Lick Run, tributary of Dunlap Creek; on Pennsylvania R. R.

INDUSTRIES

Coal and coke production; 378 Bee-hive coke ovens of Taylor Coal and Coke Co. at Searight, 250 Bee-hive coke ovens of Connellsville Central Coke Co. of Low Phos.

WATER SUPPLY

Hibbs Water Co., incorporated 1905 for Menallen Township. Half of stock owned by Taylor Coal & Coke Co. and half by Connellsville Central Coke Co. Furnishes industrial supply only, domestic supply being secured from individual shallow wells. Water company owns 36,000,000 gallon reservoir, and coal companies remainder of system.

SOURCE AND COLLECTION

Small tributary of Salt Lick Creek; 36,000,000 gallon reservoir, 5,000,000 gallon catch basin and 42,000,000 gallon reservoir of Taylor Coal & Coke Co. Water pumped from lower reservoir by 432,000 gallon steam pump to three 50,000 gallon tanks at Searight and two tanks at Low Phos of same capacity. Stream fails entirely in dry season. Reservoirs will be ultimately destroyed by mining of underlying coal.

DISTRIBUTION

By gravity through 6-inch mains.

CONSUMPTION

Supply entirely industrial for extinguishing hot coke and for boiler purposes. Average daily consumption: Taylor Coal & Coke Co. 250,000 gallons; Connellsville Central Coal & Coke Co., 125,000 gallons; total, 375,000 gallons.

MARIANNA BOROUGH, WASHINGTON COUNTY

MARIANNA WATER COMPANY

Population 1910 census, 1,363. (Incorporated in 1910.) Estimated 1915 population, 1,500a

LOCATION

Southeastern Washington County, on Ten Mile Creek, tributary of Monongahela River; on Pennsylvania R. R. Built-up portion on hillside rising from narrow flat land along creek; range of elevations 875 to 1,200.

INDUSTRIES

Settlement built by Pittsburgh-Buffalo Co.; coal mining and coke manufacturing.

WATER SUPPLY

Marianna Water Co., incorporated 1908 for West Bethlehem Township.

SOURCE AND COLLECTION

Ten Mile Creek; dam 0.66 mile downstream from upper end of borough and 0.5 mile above mouth of Big Daniels Creek; intake well, 16 feet in diameter and 23 feet deep, partly in creek and partly on bank just above dam. Flow barely sufficient in dry seasons for present consumption. Water pumped by 720,000 gallon Jeanesville pump to 90,000 gallon settling basin, thence through mechanical filter of two units, capacity 250,000 gallons each, to 12,000 gallon clear water basin. A 720,000 gallon Jeanesville duplex pump lifts water through 8-inch force main 3,400 feet north into 2,000,000 gallon reservoir on hill in borough, elevation 1,210. Connection along force main to four 7,000 gallon wooden tanks on slope below houses in borough. Water medium hard.

DISTRIBUTION

By gravity through 8-inch main; pressures 20 to 140 pounds; 5 miles distributing mains, 3-inch to 8-inch, 62% 4-inch; 27 fire hydrants, 2½-inch. The four wooden tanks used for industrial supply to boilers and coke ovens.

CONSUMPTION

Supply to 1,500 people; about 333 taps. Average daily consumption 700,000 gallons 43% domestic and 57% industrial; measured by pump displacement.

Supply 35,000 gallons daily to Pennsylvania R. R., through metered tap, and to Pittsburgh-Buffalo Co.

MARKLETON SANATORIUM, SOMERSET COUNTY

PURE MOUNTAIN WATER COMPANY
GRAVITY WATER COMPANY
HILLSIDE WATER SUPPLY COMPANY

Estimated 1915 population, 250a

LOCATION

In Markleton village, southwest Somerset County, along Casselman River, 1 mile south of Casselman borough; on Baltimore & Ohio R. R. and Western Maryland Ry.

WATER SUPPLY

Gravity Water Co., incorporated 1912 for Addison Township; Hillside Water Supply Co., incorporated 1911 for Upper Turkeyfoot Township, and Pure Mountain Water Co., incorporated 1912 for Black Township. Operating private system installed in 1907. These companies have same officers and operate as one.

SOURCE AND COLLECTION

Iser Run, tributary of Casselman River, opposite village; 400,000 gallon reservoir 1 mile southeast of Sanatorium, at elevation 1915; watershed area 7.34 square miles. Water soft.

DISTRIBUTION

By gravity through 8-inch main 1 mile long, and under river, to 50,000 gallon tank at sanatorium; average pressure 70 pounds.

CONSUMPTION

Supply to 150 people at Sanatorium and 100 people in nearby township; 12 taps. Stated average daily consumption 25,000 gallons, all domestic. No means of measurement.

MASONTOWN BOROUGH, FAYETTE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 890; increase since 1900, 424. Estimated 1915, 950a

LOCATION

Southwestern Fayette County, on Oats Creek and Big Run, two small tributaries of Monongahela River, and about 1.5 miles from their junction with river; on Monongahela R. R. and Western Penn Rys. Built-up portion on plateau 130 feet above Monongahela River; range of elevations 50 feet.

INDUSTRIES

Coal mines, 500 coke ovens of Bessemer Coke Co.; glass works and brewery.

WATER SUPPLY

Municipal works built in 1910.

SOURCE AND COLLECTION

Monongahela River; intake, pumping station and filter plant on east bank 1.75 miles from borough. Raw water raised by 158,000 gallon triplex pump, driven by Otto 8 hp. gas engine through 4-inch force main to 19,000 gallon settling basin; flows through mechanical filters, having two 125,000 gallon units, to 4,800 gallon clearwater basin; pumped by 158,000 gallon triplex pump driven by 25 hp. Otto gas engine through 6-inch force main directly into distributing system. Water medium hard.

DISTRIBUTION

By pumping direct to system, with 6-inch connection to two 25,000 gallon and one 50,000 gallon tank on hilltop 0.5 mile beyond borough limits; elevation 80 feet above borough and 200 feet above pumps; pressures 60 to 150 pounds; 1.7 miles distributing mains, 4-inch to 6-inch; 20 fire hydrants, 2½-inch.

CONSUMPTION

Supply to 1,000 people; 250 metered taps. Average daily consumption 45,000 gallons, 98% domestic and 2% industrial; measured by pump displacement.

COST AND REVENUE

Total cost of works, $8,000; annual operating expenses, $1,500; gross revenue, $3,600.

McKEESPORT CITY, ALLEGHENY COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 42,694; increase since 1900, 8,467. Estimated 1915, 46,743x

LOCATION

Southeastern Allegheny County, along south bank of Monongahela River at its junction with Youghiogheny River, on Pennsylvania R. R., Pittsburgh & Lake Erie R. R., Baltimore & Ohio R. R., Pittsburgh Rys. and Pittsburgh, McKeesport & Westmoreland Ry. Built-up portion extremely uneven, elevations ranging from 715 to 1,115.

INDUSTRIES

Tin-plating and steel working.

WATER SUPPLY

Municipal works built 1882, filter and water softening plant added 1908. Ward 10, formerly Reynoldton Borough, on west side of Youghiogheny River, supplied by Monongahela Valley Water Co., described under Glassport.

SOURCE AND COLLECTION

Youghiogheny River; intake 1.25 miles above junction with Monongahela River; 20-inch intake pipe 60 feet from river to pump well; two 7,000,000 gallon steam-turbine driven centrifugal pumps deliver water through 24-inch force main 400 feet to softening plant. Water flows by gravity through 3,000,000 gallon settling basin, 6,000,000 gallon mechanical filter of six units to 300,000 gallon clear water basin, elevation 732. Water pumped through 16-inch force main direct to system, with 12-inch connection to 5,000,000 gallon reservoir 0.33 mile east, elevation 1,020. Pumping equipment:

Number and type	Date of manufac.	Rated capacity
One Wilson-Snyder duplex pump,	1894	6 m. g. d.
Two Blake duplex pumps,	1893	3 m. g. d.
One Rust vertical water tube boiler,	1908	335 hp.
Four Reese fire tube boilers,	1893	80 hp.
One Rust vertical water tube boiler,	1913	400 hp.

DISTRIBUTION

Two services, high and low.

Low service comprises an area along southern bank of Monongahela and eastern bank of Youghiogheny rivers, including principal business section; elevations 715 to 950. Supplied by 20-inch main, reduced to 12-inch, branching from 16-inch force main 1 mile north to business district; another branch from force main to reservoir, and another, a 12-inch main, to southern city limits. From reservoir a 20-inch main, reduced to 12-inch, northerly and easterly through residential district; a second 20-inch, reduced to 12-inch, to principal business district.

High service comprises 0.5 of built-up portion of city, almost entirely residential; elevations 950 to 1,100. Pumping station near reservoir takes water from pump well connected by 20-inch main with

line from main pumping station. Elevation of pumps 1,023. Pumping equipment consists of:

Number and type	Date of manufac.	Rated capacity
Two Worthington duplex pumps,	1893	1½ m. g. d.
One West Point fire tube boiler,	1893	100 hp
One Erie City fire tube boiler,	1893	100 hp.

District supplied by 12-inch main easterly along southern limits of area about 1 mile. Pressures: low service 20 to 118 pounds; high service, 48 to 109 pounds.

Distributing mains as follows:

Size (inches),	4	6	8	10	12	16	20	24	30	Total
Length (miles),	27.6	20.2	5.7	0.5	5.7	2.1	0.7	0.2	0.1	62.8
Per cent.,	44	32	9	1	9	3	1	------	------	100

Four hundred and fifty-seven fire hydrants, 4-inch to 16-inch.

CONSUMPTION

Supply to 46,000 people; 6,008 domestic and 26 industrial taps; 3,921 meters. Average daily consumption 3,560,000 gallons, 10% industrial; measured by pump displacement; maximum daily consumption 5,353,000 gallons. The above includes an auxiliary supply of about 64,000 gallons daily to East McKeesport Water Co. (q. v.)

MEYERSDALE BOROUGH, SOMERSET COUNTY

SAND SPRING WATER COMPANY OF MYERSDALE

Population 1910 census, 3,741; increase sinces 1900, 717. Estimated 1915 population, 3,700

LOCATION

Central southern Somerset County, along Casselman River, at mouth of Flaugherty Creek; on Baltimore & Ohio R. R. and Western Maryland Ry. Built-up portion on hillside sloping toward river; range in elevation, 100 feet.

INDUSTRIES

In coal mining and agricultural district; two cigar factories, shirt factory, planing mill, two machine shops, bottling works and brewery.

WATER SUPPLY

Sand Spring Water Co. of Meyersdale, incorporated 1888 for Meyersdale Borough.

SOURCE AND COLLECTION

(1) Sand Spring, 1 mile southeast of borough; steady flow of 225,000 gallons daily from October to May, decreasing considerably in other months; water collected in 375,000 gallon reservoir, elevation 175 feet above highest point in borough. A 6-inch well, 300 feet deep and 3 feet from western side of reservoir flows through 3-inch pipe to reservoir. Capacity of well 57,000 gallons per day.

(2) Stamm Run, tributary of Flaugherty Creek, 0.5 mile east of borough line; 5,000,000 gallon reservoir 1.25 miles above mouth and 1.5 miles southeast of borough; watershed area 0.6 square miles; 350,000 gallon intake 1 mile below reservoir, elevation 150 feet above borough.

(3) Three 8-inch drilled wells, two 800 feet and one 1,000 feet deep, on west bank of Stamm Run near intake. Water pumped through 3-inch discharge by air lift using 115,000 gallon Bacon air compressor and 8 hp. Meadville steam boiler.

A 6-inch flowing drilled well, 300 feet deep, along gravity main from Stamm Run and 1,200 feet above junction, with Sand Spring line, pumped by 72,000 gallon Harris deep well pump with 25 hp. vertical steam boiler; 4-inch suction and 4-inch discharge to gravity main.

(4) Blue Lick Creek, tributary of Casselman River, 1 mile north of borough; intake 1 mile above mouth and 14-inch drilled well 400 feet deep nearby held in reserve for emergencies. Water pumped to 148,000 gallon reservoir on top of high hill, 1 mile north of borough, and flows through gravity main to borough. Pumping equipment 500,000 gallon Downie deep well pump and 80 hp. boiler.

DISTRIBUTION

From (1) by gravity through 8-inch main 3,500 feet northwest, joining 8-inch line from Stamm Run.

From (2) by gravity from intake through two 6-inch mains, joining 1,000 feet distant and continuing as 8-inch north 2,000 feet and west

9,000 feet to junction with 8-inch from Sand Spring. Automatic check valve prevents water from Sand Spring line backing up into Stamm Run line.

There are 4.2 miles gravity, delivery and force mains, 6-inch and 8-inch; 7.6 miles distributing mains, ½-inch to 10-inch; pressures 50 to 110 pounds; 33 fire hydrants, principally 4-inch.

CONSUMPTION

Supply to 3,200 people; 800 domestic and 5 industrial taps. Stated average consumption, 205,000 gallons; 10% industrial. No means of measurement.

PRIVATE SUPPLY

Meyersdale brewery has private system.

MONESSEN, CHARLEROI, NORTH CHARLEROI AND DONORA BOROUGHS, WASHINGTON AND WESTMORELAND COUNTIES

TRI-CITIES WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915 population
Monessen,	11,775	9,578	13,000a
Charleroi,	9,615	3,685	11,000a
Donora,	8,174	Incorp. 1901	10,000a
North Charleroi,	1,008	583	1,500a
South Donora Village (Carroll Twp.),			1,000a
Wireton Village (Rostraver Twp.),			400a
Total,			36,900a

LOCATION

Monessen, in southwestern corner of Westmoreland County, with Wireton Village west and adjacent along Monongahela River. Donora 1 mile below, and Charleroi, 1 mile above, Monessen, on opposite side of river. On Pennsylvania R. R., Pittsburgh & Lake Erie R. R., Pittsburgh Rys., Westside Electric Ry. and Webster, Monessen, Belle Vernon and Fayette City Street Ry. Built-up portion along river occupied by industrial plants, back of which are business section and residential sections extending up hillsides.

INDUSTRIES

In Monessen, Pittsburgh Steel Co. (two plants), American Tin Plate Co., American Steel Hoop Co., Page Woven Wire Fence Co.

In Donora, American Steel and Wire Co.

In Charleroi, Pittsburgh Plate Glass Co., Charleroi Coal Co., Carnegie Coal Co., MacBeth-Evans Glass Co.

WATER SUPPLY

Tri-Cities Water Co., incorporated 1897 as Monessen Water Co. for Rostraver Township, Westmoreland County, and name changed in 1912, after purchase of rights, properties and franchises of following companies:

Name	Inc.	Incorporated for
Charleroi Water Co.,	1890	Fallowfield Township, Washington County
Donora Water Co.,	1900	Carroll Township, Washington County

Intake and pumping station of Monessen Water Co. abandoned in 1912, when pumping station and filters of old Charleroi Water Co. were enlarged.

SOURCE AND COLLECTION

Monongahela River; intake, pumping station and filter plant at upper end of Charleroi. A 20-inch intake pipe 800 feet from filter crib in river to pump well; pool, full elevation of river, 723.5. Water lifted to 375,000 gallon settling basin, then flows through mechanical filters, having ten 500,000 units, to clear water basin, and pumped direct to distributing system through 16-inch force main. Water medium hard. Pumping equipment consists of:

Number and type	Rated capacity
One Epping-Carpenter duplex pump,	4,000,000 gallons daily
One Epping-Carpenter pump,	3,000,000 gallons daily
One Wilson-Snyder pump (auxiliary),	2,500,000 gallons daily
One Fairbanks-Morse low service pump,	4,000,000 gallons daily
One Epping-Carpenter low service pump (auxiliary),	3,000,000 gallons daily
Two Gary boilers,	150 hp.
One McNull boiler,	250 hp.

DISTRIBUTION

By pumping directly into distributing system of Charleroi, with 16-inch connection to 5,000,000 gallon equalizing reservoir on hill in western part of Charleroi, at elevation 1,061. At lower end of Charleroi 16-inch main enlarges to 20-inch main, 1,800 feet to river at Lock No. 4, crosses river 2 feet under bed as two 16-inch mains, each 800 feet long, connects with 20-inch main at Wireton, 2,400 feet to

12-inch main of Monessen distributing system. A 12-inch main connects with 1,200,000 gallon reservoir on hill in Wireton, 0.5 mile back from river, at elevation 1,054; reservoir was settling basin for old filter plant of Monessen Water Co. Filters consist of six 500,000 gallon mechanical units and a 165,000 clear water basin now held for emergencies.

At lower end of Monessen 16-inch main reduces to 12-inch, crosses river, passes through South Donora to Donora, connects to 275,000 gallon tank in northwestern part of borough, at elevation 1,010. A 12-inch line supplies a high service pumping station about 1,000 feet east of standpipe, near Seventh Street in Donora. Here electrically operated 700,000 gallon pump raises water through 12-inch force main to a 160,000 gallon tank, about 800 feet west of other tank, at elevation 1,097.

Pressures and fire hydrants as follows:

	Charleroi	Donora	Monessen	Average
Minimum pressure (pounds),	25	25	35	25
Maximum pressure (pounds),	140	115	130	140
Fire hydrants,	81	68	111	Total 260

Distributing mains, in miles, as follows:

Size (inches)	20	18	16	14	12	10	8	6	4	2 & smaller	Total
Charleroi,	0.6	------	1.3	0.5	0.5	0.7	2.8	7.7	2.5	1.4	18.0
Donora,	------	------	0.8	------	1.9	1.3	2.0	3.1	2.7	0.4	12.2
Monessen,	0.6	0.1	0.7	------	0.4	0.3	2.7	8.9	3.5	1.4	18.6
Total,	1.2	0.1	2.8	0.5	2.8	2.3	7.5	19.7	8.7	3.2	48.8

CONSUMPTION

	Population supplied	Number of taps		Meters	Average daily consumption	
		Domes.	Indust.		Total (gals.)	Industrial (gals.)
Charleroi,	11,000	1,863	7	1,577	800,000	40,000
Donora,	10,000	1,066	4	1,070	450,000	45,000
Monessen,	13,000	2,347	8	807	1,700,000	85,000
North Charleroi,	1,500	*				
South Donora,	1,000	†				
Wireton,	400	‡				
Total,	36,900	5,276	19	3,454	2,950,000	170,000

*Included in Charleroi
†Included in Donora
‡Included in Monessen

Consumption measured by pump displacement.

Supplies Charleroi Coal Co., Carnegie Coal Co., Page Woven Wire Fence Co., Pittsburgh & Lake Erie R. R. and a foundry. Remaining industries pump their own supplies from river.

MONONGAHELA CITY AND NEW EAGLE (BORO.), WASHINGTON COUNTY

THE MONONGAHELA CITY WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Monongahela City,	7,598	2,425	9,000a
New Eagle Borough,			1,800a

LOCATION

Northeastern Washington County, along Monongahela River, about 0.25 mile above mouth of Pigeon Creek; on Pennsylvania R. R. and Pittsburgh Rys.

INDUSTRIES

American Window glass Co., Capell Fan & Engr. Co., Monongahela Consolidated Coal and Coke Co., Union paper mill, Black Diamond Coal Co., Gatsburg Coal Co., Cyclops Foundry Co., American Photo Glass Co.

WATER SUPPLY

The Monongahela City Water Co., incorporated 1886 for Monongahela City and vicinity. In 1902 this company leased the Domestic Water Co., incorporated 1902 for Carroll Township.

SOURCE AND COLLECTION

Monongahela River; intake, pumping station and filter plant at upper end of borough. Water enters intake well through 12-inch pipe line and lifted by 2,000,000 gallon electrically-driven Worthington pump into 45,000 gallon settling basin; 10-inch suction line to river can be used. Water flows through mechanical filters, four units, having total capacity of 2,000,000 gallons daily, to 20,000 gallon clear water basin; pumped through 10-inch force main 2,500 feet to

2,500,000 gallon distributing reservoir on hill southwest of borough. Pumping equipment a 2,500,000 gallon Wilson-Snyder steam pump, a 1,500,000 gallon Hawley steam pump, one 1,250,000 gallon motor-driven Deming pump, one 1,296,000 gallon Rees Roturbo motor-driven pump and one 125 hp. Erie City boiler. Water medium hard.

DISTRIBUTION

By gravity through 10-inch and 8-inch mains; pressures 75 to 110 pounds. Distributing mains as follows:

Size (inches),	12	10	8	6	4	2	1	Total
Length (miles),	0.94	1.49	2.52	2.25	7.86	1.66	1.53	17.35
Per cent.,		9	14	13	45	10	9	100

Fifty-one fire hydrants.

CONSUMPTION

Supply to 5,000 people in Monongahela City and 600 in New Eagle; 1,275 and 105 taps respectively. In Monongahela City 908 domestic and 12 industrial taps metered, showing daily consumption of 20,000 gallons industrial and 240,000 gallons domestic. Total average daily consumption 400,000 gallons, 60% domestic and 40% industrial; measured by pump displacement.

Supplies Capell Fan & Eng'r. Co.; Gatsburg Coal Co, and a partial supply to American Window Glass Co., repair yards of Monongahela Consolidated Coal & Coke Co., Union Paper mills and Cyclops Foundry Co.

INDUSTRIAL

The Black Diamond Coal Co., American Window Glass Co., Monongahela Consolidated Coal & Coke Co. and Union paper mills have private intakes in Monongahela River.

MONONGAHELA (FORWARD TWP.), ALLEGHENY COUNTY

AXLETON WATER COMPANY

Estimated 1915 population, 100a.

LOCATION

Extreme southern Allegheny County, on east bank of Monongahela River, opposite Monongahela City; on Pittsburgh & Lake Erie R. R.

INDUSTRIES

Village in connection with Liggett Spring and Axle Co.

WATER SUPPLY

Axleton Water Co., incorporated 1902 for Forward Township.

SOURCE AND COLLECTION

Monongahela River; water pumped from river into two iron tanks, one 18 feet in diameter, 22 feet high, other 26 feet in diameter, 20 feet high.

DISTRIBUTION

By gravity through 10-inch main.

CONSUMPTION

Supply to 100 people; 30 taps. Average daily consumption 150,000 gallons, 148,000 industrial; measured by pump displacement.

MOUNT PLEASANT BOROUGH AND VILLAGES IN VICINITY, WESTMORELAND COUNTY

MOUNT PLEASANT WATER COMPANY
(H. C. Frick Coke Co.)

Borough: population 1910 census, 5,812; increase since 1900, 1,067. Estimated 1915 population, 6,285a.

Estimated 1915 population of villages: Acme 410, Alice 250, Central 555, Morewood 1,135, Tarrs, 560, Bridgeport (Mt. Pleasant Twp.) 1,015 Standard (Mt. Pleasant Twp.), 1,480, Hecla No. 1 and No. 3 1,295; total, 6,700.

LOCATION

Central southern Westmoreland County, along Jacobs Creek and tributaries; on Pennsylvania R. R., Baltimore & Ohio R. R. and West Penn Rys. Hilly and rolling country; range of elevations in built-up portion of borough 1,075 to 1,276.

INDUSTRIES

In centre of coke region; brewery, glass works and ice plant.

WATER SUPPLY

Mount Pleasant Water Co., incorporated 1881 for Mount Pleasant Borough and vicinity. Works built in 1886-88. Owned and operated by H. C. Frick Coke Co.

SOURCE AND COLLECTION

Jacobs Creek; two storage reservoirs, total capacity 215,000,000 gallons, 1.5 miles south of borough; watershed area 57 square miles, Brush Run 7 square miles. Pumping station at lower reservoir pumps water through 16-inch force main 8,320 feet into 3,000,000 gallon distributing reservoir at high point in borough. Pumping equipment two 1,500,000 gallon Gordon-Maxwell pumps, a 1,500,000 gallon Wilson-Snyder pump and three 70 hp. Munroe return tubular boilers. Water medium hard.

DISTRIBUTION

Low service supplied by gravity to lower portions of Mount Pleasant and to all villages and industries outside; 10-inch main leading to 1,200,000 gallon reservoir at Standard, elevation 1,179, and two 15,000 gallon storage tanks at Alice, elevation 1,148.

High service to Mount Pleasant by pumping from distributing reservoir to 188,000 and 112,000 gallon standpipes in borough. Pumping equipment 1,500,000 gallon Wilson-Snyder duplex pump and 1,000,000 gallon Gordon duplex pump.

Pipe lines to industrial works at Tarrs, Hecla No. 1 and No. 3 are owned by the companies as follows (those to Hecla being all steel, asphalt coated):

Size (inches),	10	8	6	4
To Tarrs (feet),	----------	2,880	4,140	----------
To Hecla No. 1 and No. 3 (feet),	11,454	4,558	6,641	2,260

Pressures, 35 to 90 pounds. Distributing mains of Mount Pleasant Water Company as follows:

Size (inches),	12	10	8	6	4	2	Total
Length (miles),	3.2	2.0	2.2	1.4	3.1	0.8	12.7
Per cent.,	25.0	16.0	17.0	11.0	25.0	6.0	100.0

Sixty-one fire hydrants, all 6-inch, in borough; owned by water company.

CONSUMPTION

	Population supplied	Taps	Meters	Average daily consumption	
				Total (gals.)	Industrial (gals.)
Mount Pleasant,	6,285	1,005	21	587,822	38,684
Acme,	410	1	1	94,967	68,600
Alice,	225	1	1	111,407	88,875
Country Districts,	880	171	----------	15,156	----------
Bridgeport,	1,015	56	2	193,914	104,940
Central,	555	1	1	153,363	113,461
Morewood,	1,135	2	2	325,795	242,129
Standard,	1,415	4	4	419,205	312,687
Duncan Plan of Lots,	100	18	1	14,584	4,959
Tarrs,	385	14	1	133,782	107,500
Hecla No. 1 and No. 3,	1,275	10	1	251,101	174,012
Total,	13,680	1,277	35	2,301,096	1,255,847

Consumption estimated by pump displacement. All water supplied to industrial companies distributed by them to their own tenements and works.

NEW DICKERSON RUN (DUNBAR AND FRANKLIN TWPS.), FAYETTE COUNTY

DICKERSON RUN WATER COMPANY

Estimated 1915 population, 500a.

LOCATION

Central northern Fayette County, along south bank of Youghiogheny River; on Pittsburgh & Lake Erie R. R. and West Penn Rys Built-up portion on bluff above river flats.

INDUSTRIES

Shops and roundhouse of Pittsburgh & Lake Erie R. R.

WATER SUPPLY

Dickerson Run Water Co., incorporated 1911, for New Dickerson Run Village.

SOURCE AND COLLECTION

Drilled well, 104 feet deep, on hill in village; reported average yield 18,000 gallons daily. A 15,600 gallon pump forces water through 1½-inch pipe 1,700 feet to 15,600 gallon reservoir.

DISTRIBUTION

By gravity through 4-inch pipe; pressures, 15 to 25 pounds; about 0.6 mile distributing mains, 2-inch and 3-inch; no fire hydrants.

CONSUMPTION

Supply to 60 people; 12 taps. Average consumption 750 gallons daily, all domestic; measured by meter.

OLIVER AND MT. BRADDOCK (NORTH UNION TWP.), REVERE (MENALLEN TWP.), FAYETTE COUNTY

THE SOUTH WEST WATER COMPANY
(Oliver & Snyder Steel Company)

Estimated 1915 population: Oliver 2,000, Mt. Braddock 725b, Revere 100b.

LOCATION

Central Fayette County; Mt. Braddock near headwaters of Gist Run, 5 miles northeast of Uniontown; Oliver, on Redstone Creek, 1 mile north of Uniontown; Revere, at headwaters of Jennings Run, 3 miles west of Uniontown. On Pennsylvania R. R., Baltimore & Ohio R. R. and West Penn Rys. Built-up portion on hilly, rolling country; range of elevations 975 to 1,162.

INDUSTRIES

At Mt. Braddock and Revere, coke ovens of W. J. Rainey. At Oliver, plants Nos. 1, 2 and 3 of Oliver & Snyder Steel Co.

WATER SUPPLY

The South West Water Co., incorporated 1892 for North Union Township, controls Central Water Co., incorporated 1904 for Menallen Township, and South Union Water Co., incorporated 1904 for South Union Township. Sells water to these two companies and to Revere Water Co., incorporated 1905 for South Union Township.

SOURCE AND COLLECTION

Youghiogheny River; intake and pumping station 1 mile south of Connellsville, near Paddock Siding of B. & O. R. R., and 0.5 mile below intake of Trotter Water Co. Water pumped through 12-inch force main 4.91 miles to 7,000,000 gallon distributing reservoir at Mt. Braddock, elevation 1,285. Pumping equipment two 3,000,000 gallon duplex pumps and four Babcock and Wilcox 200 hp. water tube boilers. Water medium hard.

DISTRIBUTION

By gravity from Mt. Braddock reservoir. An 8,000,000 gallon distributing reservoir at Revere. Pressures 100 to 300 pounds. Distributing mains as follows:

Size (inches)	Length (miles)	From	To
12	3.64	Mt. Braddock Res.,	Oliver No. 3
12	1.25	Oliver No. 3,	Oliver No. 1
8	0.50	Oliver No. 1,	Oliver No. 2
8	2.00	Oliver No. 1,	Revere
6	1.00	Oliver No. 1,	Revere
6	1.50	Mt. Braddock Res.,	Mt. Braddock
Total,	9.89		

Twenty-seven fire hydrants, all 4-inch.

CONSUMPTION

Supply to 2,000 persons; 123 tenement taps at Oliver No. 1 and No. 3, and two coke oven connections at Oliver No. 2. Average daily consumption 583,200 gallons, 10% domestic and 90% industrial, measured by meter and pump displacement. Metered consumption 203,150 gallons industrial, and 5,000 gallons domestic; 38 metered taps, 2 industrial.

OUTCROP (SPRING HILL TWP.), FAYETTE COUNTY

RICH HILL WATER COMPANY

Estimated 1915 population, 250a.

LOCATION

Southwestern corner of Fayette County, at headwaters of small tributary of Georges Creek; on Baltimore & Ohio R. R.

INDUSTRIES

Bee-hive coke ovens of Rich Hill Coke Co.

WATER SUPPLY

Rich Hill Water Co., incorporated 1903 for Spring Hill Township.

SOURCE AND COLLECTION

McIlree Springs, tributary of Rubles Run, tributary of Cheat River; about 175 feet above village. A 500,000 gallon reservoir 1 mile below source and 3 miles southeast; watershed area 800 acres. Water soft.

DISTRIBUTION

By gravity through 3-inch mains 3.5 miles long; about 0.25 mile of distributing mains; pressure 140 to 160 pounds.

CONSUMPTION

Supply to 250 people; 24 taps. Stated average consumption 20,000 gallons daily; 20% domestic and 80% industrial. No means of measurement.

INDUSTRIAL SUPPLY

Crystal Coke Co. has private system.

PENNSYLVANIA RAILROAD

MOUNTAIN WATER SUPPLY COMPANY

LOCATION

Main Line Pennsylvania R. R. traverses this section in an east and west direction from summit point on divide, elevation 1,207.7, along Loyalhanna Creek to Greensburg, Westmoreland County, down Brush Creek and Turtle Creek 22.1 miles to Braddock, elevation 827.7, thence it follows east side of Monongahela river 10.1 miles to Pittsburgh; elevation 758 at Pittsburgh.

WATER SUPPLY

Main line from Philadelphia to Pittsburgh receives its principal supply of water from eight incorporated water companies, each form-

ing separate system. Charters for some of these companies were obtained and works built by American Pipe Manufacturing Co. of Philadelphia, a complete description of which is included under Pennsylvania Railroad, Section No. 12.

Supply in this section furnished by Mountain Water Supply Co., incorporated 1902 for Westmoreland, Fayette, Allegheny and Washington counties.

Another company in this section, controlled by the Pennsylvania R. R. Co., is Citizens Water Co. of Scottdale, described under Scottdale.

SOURCE AND COLLECTION

Indian Creek, tributary of Youghiogheny River, Springfield Township, Fayette County; 251,000,000 gallon storage reservoir 4 miles above mouth; watershed area 109 square miles.

DISTRIBUTION

By gravity through 36-inch pipe line supplying 11 distributing reservoirs, combined capacity 45,515 000 gallons. A 36-inch line follows Indian Creek to mouth, thence Youghiogheny River to Connellsville, where it feeds 6,500,000 gallon Gibson Junction distributing reservoir; thence 36-inch pipe line north to Southwest Branch at Ruth and Scottdale, 30-inch line to Alverton, Youngwood and Radebaugh; main line west to Pitcairn, reducing to 24-inch line to Port Perry Branch Junction, 20-inch line across Monongahela River at Thomson. This pipe line supplies following distributing reservoirs:

Name	Location	Elevation (feet)	Capacity (gals.)
Stoners Summit,	Near Scottdale,	1,200	13,670,000
Youngwood,	At Youngwood,	1,022	1,000,000
Radebaugh,	At Radebaugh,	1,127	8,500,000
Steel Tank,	At Pitcairn,	1,088	1,760,000
Reservoir,	At Pitcairn,	1,084 (under construction)	15,250,000

Another supply line, 20-inch, from Gibson Junction reservoir, reducing 16-inch, 12-inch and 10-inch, crosses Youghiogheny River, Redstone Junction, through Brownsville, crosses Monongahela River, passes through California and Charleroi to Ormsby, in Pittsburgh City. Opposite Thomson a 20-inch line crosses river, connecting to 24-

inch line at Port Perry Branch Junction. This line supplies following distributing reservoirs:

Name	Location	Elevation (feet)	Capacity (gals.)
Rainey Junction,	Gist,	1,203	2,800,000
	Near Uniontown,	1,102	2,000,000
	Smock,	974	2,000,000
	Charleroi,	840	7,235,000
	Elben,	840	2,000,000
	Howard,	886	2,000,000
Standpipe,	Monongahela City,	846	2,550,000

CONSUMPTION

Supply entirely industrial to the following places:

Place	Average daily consumption (estimated) (gallons)	Place	Average daily consumption (estimated) (gallons)
Grapeville,	400,000	Hempfield Branch,	30,000
Shafton,	84,425	Pittsburgh, 30th St.,	600,000
*Pitcairn,	1,500,925	Howard,	250,000
P. V. & C. Junction,	63,650	†Thomson,	325,000
County Home Junction,	52,160	Clairton,	200,000
Youngwood,	1,000,000	Shire Oaks,	500,000
Tarrs,	300	Monongahela City,	80,000
Everson,	12,000	Donora,	21,000
New Haven,	45,425	Charleroi,	170,000
Rainey Yard,	25,000	West Brownsville Jct.,	51,500
Glass House siding,	20,000	Smock,	32,000
Manor "Y",	16,000	Keister Junction,	25,000
Blackburn "Y",	59,000	Redstone Junction,	52,000

*Part of consumption can be furnished by wells.
†Part of consumption can be furnished by pumping station on Monongahela River.

POINT MARION BOROUGH, FAYETTE COUNTY

SPRING HILL WATER COMPANY

Population 1910 census, 1,389; increase since 1900, 814. Estimated 1915 population, 2,500a.

LOCATION

Extreme southwestern Fayette County, at mouth of Cheat River, at Monongahela River; on Baltimore & Ohio R. R.

INDUSTRIES

Five window glass plants.

WATER SUPPLY

Spring Hill Water Co., incorporated 1899 for Point Marion Borough. Works constructed in 1903.

SOURCE AND COLLECTION

Cheat River; intake and pumping station 1 mile west and upstream from centre of borough. Water pumped through 5-inch, reducing to 3-inch, force main, 750 feet to 700,000 gallon reservoir on hill near intake, 320 feet above pumps. Pumping equipment one 188,000 gallon Deane triplex pump, one 188,000 gallon Deming and two 20 hp. Bessemer gas engines. Water soft.

DISTRIBUTION

By gravity through 8-inch main; pressures 50 to 320 pounds; about 3 miles distributing mains; 15 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,500 people; 350 taps, 300 metered. Average daily consumption 85,000 gallons; measured by pump displacement. Supplies fire protection to all window glass plants.

PORT VUE BOROUGH, ALLEGHENY COUNTY

PORT VUE WATER COMPANY
(McKeesport Tin Plate Co.)

Population 1910 census, 1,978; increase since 1900, 175. Estimated 1915, 2,300a.

LOCATION

Southeastern Allegheny County, along west side of Youghiogheny River, opposite McKeesport City; on Pittsburgh & Lake Erie R. R. Built-up portion on hilltop.

INDUSTRIES

McKeesport Tin Plate Co.'s plant.

WATER SUPPLY

Port Vue Water Co., incorporated 1901 for Port Vue Borough by McKeesport Tin Plate Co. Original works built 1904; later a change of source from drilled wells.

SOURCE AND COLLECTION

Buys water from Monongahela Valley Water Co., described under Elizabeth Borough, in this section. Water pumped from gravity main at Manning Avenue, in Tenth Ward of McKeesport, by booster pump station of Port Vue Water Co. and lifted 210 feet through 4-inch force main 3,000 feet into two 50,000 gallon tanks at highest point in Port Vue. Pumping equipment 86,400 gallon Gould triplex pump driven by 10 hp. electric motor. Water soft.

DISTRIBUTION

By gravity through 6-inch main; pressures 50 to 200 pounds; 5 miles distributing mains, 1-inch to 6-inch; 37 fire hydrants.

CONSUMPTION

Supply to 1,500 people; 220 metered taps. Average daily consumption 35,000 gallons, all domestic.

REPUBLIC AND VILLAGES IN VICINITY (REDSTONE TWP.), FAYETTE COUNTY

GENERAL WATER COMPANY
(Republic Iron and Steel Co.)

Estimated 1915 population, 5,000a.

LOCATION

Western Fayette County, along tributaries of Monongahela River; on Pennsylvania R. R.

INDUSTRIES

Brier Hill, Brier Hill Coke Co.; Orient, Orient Coke Co.; Allison No. 1, W. J. Rainey (coke); Allison No. 2, W. J. Rainey (coke); Royal, W. J. Rainey (coke); Fairbanks, Struthers Coal & Coke Co.; Republic, Republic Iron & Steel Co.; Thompson No. 1, Thompson-Connellsville Coke Co.; Thompson No. 2, Thompson-Connellsville Coke Co.; Tower Hill No. 1, Tower-Hill-Connellsville Coke Co.; Tower Hill No. 2, Tower-Hill-Connellsville Coke Co.

WATER SUPPLY

General Water Co., incorporated 1906 for Redstone Township by Republic Iron & Steel Co. It is reported that 80% of the stock is divided equally between Republic Iron & Steel Co., the Thompson-Connellsville Coke Co., the Tower Hill-Connellsville Coke Co. and the Orient Coke Co; the other 20% of the stock equally divided between Brier Hill Coke Co. and W. J. Rainey.

System used primarily for industrial purposes. Besides this system, the various coke companies have private systems. (See table of industrial systems.)

SOURCE AND COLLECTION

Monongahela River; intake and pumping station 3 miles above Rices Landing, 5.5 miles southwest of Brownsville and 6 miles below intake of Trotter Water Co. Two 20-inch intake pipes, 120 feet and 130 feet in length and 10 feet below pool level, to pump well. Pumping equipment two 3,000,000 Epping-Carpenter duplex pumps, head of 500 feet, and three 150 hp. return tubular boilers. Water pumped through 16-inch force main 14,000 feet into 2,000,000 gallon distributing reservoir east of pumping station.

DISTRIBUTION

By gravity through 20-inch main, reducing to 18-inch, 14-inch and 12-inch, through Tower Hill, No. 2, Republic and Brier Hill to Royal, with branches near Republic to Thompson No. 1 and No. 2, Tower Hill No. 1, Orient and Fairbanks; pressures 10 to 130 pounds. Distribution mains, not including force main, as follows:

Size (inches),	20	18	16	14	12	8	6	Total
Length (miles),	0.6	1.2	0.3	0.5	0.4	1.9	0.6	5.5

CONSUMPTION

Supply wholesale to 81 taps; 80 meters; nearly all to industrial plants. Average daily consumption 1,500,000 to 3,500,000 gallons, 99.6% industrial; measured by pump displacement and meters. Small domestic consumption furnished 5,000 people through 154 house connections and numerous yard hydrants for 1,173 houses, supplemented by wells and springs; industrial supply supplemented by wells and private sources.

ROCKWOOD BOROUGH, SOMERSET COUNTY

ROCKWOOD WATER COMPANY

Population 1910 census, 1,300; increase since 1900, 615. Estimated 1915, 1,500a.

LOCATION

Western central Somerset County, along Casselman River, at mouth of Coxe Creek; on Baltimore & Ohio R. R. and junction of branch to Johnstown.

INDUSTRIES

In coal mining district; brewery.

WATER SUPPLY

Rockwood Water Co., incorporated 1905 for Rockwood Borough.

SOURCE AND COLLECTION

(1) Sand Run, tributary of Laurel Run, tributary of Iser Run, 1 mile above junction with Casselman River; 1,000,000 gallon reservoir near headwaters and 3 miles south of borough. Water by gravity through pipe line 500 feet into two 600,000 gallon distributing reservoirs. Water from 10-inch drilled well 120 feet deep is here pumped for auxiliary supply in dry seasons, by 300,000 gallon pump. Water soft.

(2) Evans Run, tributary of Casselman River, from south opposite borough; three reservoirs 0.5 mile above mouth, capacity 2,500,000 gallons. Water soft.

DISTRIBUTION

From (1) by gravity through 12-inch, reducing to 10-inch, 8-inch and 6-inch main.

From (2) by gravity through 12-inch, reducing to 10-inch and 6-inch main.

Pressures 90 to 110 pounds; 3 miles distributing mains 4-inch and 6-inch; 30 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,500 people; 215 taps, 8 domestic and 2 industrial are metered. Average daily consumption, 600,000 gallons 25% domestic and 75% industrial to railroad, and brewery; measured by meter.

SCOTTDALE BOROUGH AND VILLAGES IN VICINITY, FAYETTE AND WESTMORELAND COUNTIES

CITIZENS WATER COMPANY OF SCOTTDALE
(Pennsylvania Railroad)

	Population 1910 census	Increase since 1900	Estimated 1915
Scottdale,	5,456	1,195	5,500b
Bessemer, Westmoreland County,			
Buck Eye, Westmoreland County,			
Pershing, Westmoreland County,			
West Overton, Westmoreland County,	-----	----------	4,500b
Everson, Fayette County,			
Kifertown, Fayette County,			
McClure, Fayette County,			
Prittstown, Fayette County,			

LOCATION

Territory in southern Westmoreland County and northern Fayette County, along Jacobs Creek; on Pennsylvania R. R., Baltimore & Ohio R. R. and West Penn Rys.

INDUSTRIES

Coal mining and coke manufacturing, American Sheet and Tin Plate Co., United States Cast Iron Pipe and Foundry Co. and Scottdale Furnace and Corrigan McKinney Co.

WATER SUPPLY

Citizens Water Co. of Scottdale, incorporated 1888 for Scottdale borough, Westmoreland County, controlled by Pennsylvania R. R. In 1907 purchased rights and franchises of Everson Water Co., incorporated 1901 for Upper Tyrone Township, Fayette County. Works built 1890. Emergency connection with system of Mountain Water Supply Co., also controlled by Pennsylvania R. R. Co.

SOURCE AND COLLECTION

(1) Green Lick Run, tributary of Jacobs Creek from east 2.5 miles northeast of Scottdale; a 166,500,000 gallon reservoir 2 miles above mouth at elevation 1,252.6; watershed area 3.4 square miles.

(2) Mounts Run, tributary of Youghiogheny River, at Connellsville; intake on this stream and its tributary, Spruce Run, elevation 1,281; watershed area 4.06 square miles. Intakes connected by pipes to Green Lick reservoir.

DISTRIBUTION

By gravity through 16-inch and 12-inch mains from Green Lick reservoir to Scottdale, where average pressure is 60 pounds.

CONSUMPTION

Supply to 2,135 consumers, 75 metered. Reported average daily consumption 2,073,200 gallons. No means of measuring.

Supplies various coke companies, Scottdale furnace and partial supply to American Sheet & Tin Plate Co., which, together with U. S. Cast Iron Pipe Foundry Co., is supplied by Trotter Water Co.

SMOCK (FRANKLIN TWP.), FAYETTE COUNTY

FRANKLIN TOWNSHIP WATER COMPANY
(H. C. Frick Coke Co.)

Estimated 1915 population, 1,130a.

LOCATION

Northwestern Fayette County, along Redstone Creek; on Redstone Branch of P. V. & C. Railroad.

INDUSTRIES

Colonial No. 1 plant of H. C. Frick Coke Co., 500 coke ovens.

WATER SUPPLY

Franklin Township Water Co., incorporated 1903 for Franklin Township by Pittsburgh Coal Co., now owned by H. C. Frick Coke Company.

SOURCE AND COLLECTION

Allen Run, tributary of Redstone Creek, 1 mile above village; 50,000,000 gallon reservoir 1 mile above mouth; watershed area 3.37 square miles. Water medium hard.

DISTRIBUTION

By gravity through 8-inch main 2.2 miles to coke works, where water is pumped to four tanks, total capacity, 175,762 gallons, by coke company; pressures 17 to 36 pounds.

CONSUMPTION

Average daily consumption 253,400 gallons, entirely industrial, for seven boilers. Domestic and fire protection supply by coke company, water pumped from two wells to 50,000 gallon tank.

SOMERSET BOROUGH, SOMERSET COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 2,612; increase since 1900, 778. Estimated 1915, 3,200a.

LOCATION

County seat, central Somerset County, at headwaters of Coxe Creek, tributary of Casselman River, and just south of divide between Allegheny and Monongahela drainage basins; on Baltimore & Ohio R. R. and terminus of Pittsburgh, Westmoreland & Somerset R. R.

INDUSTRIES

Near bituminous coal fields; foundry and machine shop and several planing mills.

WATER SUPPLY

Municipal plant built in 1894.

SOURCE AND COLLECTION

Three drilled wells, 120 to 142 feet deep, in northern part of borough. Pump at each well forces water either directly to borough mains or through 10-inch main 4,300 feet into 675,000 gallon storage reservoir on hill 0.25 mile west, at elevation 2,310. Capacity of wells 300,000 gallons daily. Pumping equipment 720,000 gallon Platt pump, 300,000 gallon Epping-Carpenter duplex pump and two 70 hp. Titusville return tubular boilers. Water medium hard.

DISTRIBUTION

By pumping through 10-inch main to reservoir and to borough; pressures 70 to 100 pounds. Distributing mains as follows:

Size (inches),	10	8	6	4	Total
Length (miles),	1.1	0.4	3.1	1.9	6.5

Eighty fire hydrants, 6-inch.

CONSUMPTION

Supply to 3,000 people; 750 taps and 1 industrial tap, 235 domestic metered. Metered consumption 36,405 gallons daily. Average daily consumption 242,600 gallons, 95% domestic and 5% industrial; measured by pump displacement. Large quantity used to flush borough sewer lines.

COST AND REVENUE

Total cost of works, $60,000; annual operating expenses, $5,427; gross revenue, $10,213.

SOMERSET COUNTY HOME, SOMERSET COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 300a.

LOCATION

Central Somerset County, at summit of watershed of Coxe Creek, tributary of Casselman River, and 2 miles east of Somerset Borough. Tract of 347 acres, on which are Administration Hall and Home, the Asylum, power house, laundry, bakery and farm buildings.

SOURCE AND COLLECTION

(1) Spring No. 1 on hillside, east and 2,236 feet from power house, collected in 36,000 gallon basin. Spring No. 2 north, on hillside about 600 feet from power house, collected in basin 9 feet by 12 feet. Spring No. 3, 14 feet higher than No. 2, piped to basin at No. 2. A 36,000 gallon gasoline pumping engine lifts water through 3-inch force main to collecting basin at No. 1. Flow decreases very much in summer. Water soft.

Water from 6-inch drilled well, 87 feet deep, 1,600 feet south of buildings, pumped by gasoline engine through 4-inch force main to basin at Spring No. 1, and to 30,000 gallon tank 22 feet above basin, used for fire protection. Water sulphurous.

(2) Kimberley Run, tributary of Coxe Creek, 1 mile south of Somerset, auxiliary supply in dry seasons; intake 1 mile south of Spring No. 1, from which water is pumped through 2-inch pipe 5,400 feet to basin at Spring No. 1.

Proposed to make this supply permanent by constructing pumping station, filter plant, pipe line and distributing reservoir.

CONSUMPTION

Supply to 300 people. Average daily consumption 16,000 gallons, all domestic; measured at collecting basin No. 1.

TRAFFORD BOROUGH, WESTMORELAND AND ALLEGHENY COUNTIES

TRAFFORD WATER COMPANY

Population 1910 census, 1,959 (Incorporated in 1904). Estimated 1915 population, 2,500a.

LOCATION

Western Westmoreland County and eastern Allegheny County, at junction of Brush Creek with Turtle Creek; on Pennsylvania R. R. and Pittsburgh Rys. Range of elevations 780 feet in manufacturing district and 850 to 1,000 feet in built-up portion.

INDUSTRIES

Westinghouse Foundries Co. and Linde Air Products Co.

WATER SUPPLY

Trafford Water Co., incorporated 1902 as a merger of following companies:

Name	Inc.	Incorporated for
Brinton Water Co.,	1901	Penn Twp., Westmoreland County
Stewart Water Co.,	1901	North Huntingdon Twp., Westmoreland County
Gallatin Water Co.,	1901	North Versailles Twp., Allegheny County
Grant Water Co.,	1901	E. Pittsburgh Boro., Allegheny County
Madison Water Co.,	1901	Turtle Creek Boro., Allegheny County
Pitcairn Water Co.,	1901	Pitcairn Boro., Allegheny County
Trafford Water Co.,	1901	Patton Twp., Allegheny County
Wilmerding Water Co.,	1901	Wilmerding Boro., Allegheny County

SOURCE AND COLLECTION

Water purchased from Pennsylvania Water Co., is described under Wilkinsburg Boro., Section No. 18.

DISTRIBUTION

By gravity through 12-inch connection with 12-inch main of Pennsylvania Water Co., at eastern borough line of Pitcairn, 1.5 miles south of Trafford; pressures 22 to 165 pounds.

Distributing mains as follows:

Size (inches),	12	10	8	6	4	Total
Length (miles),	1.3	0.1	1.0	2.8	2.3	7.5
Per cent.,	17	1	13	38	31	100

Forty-six fire hydrants, 17% 6-inch and 83% 4-inch.

CONSUMPTION

Supply to 2,000 people; 291 domestic and 2 industrial taps, all metered. Average daily consumption 185,000 gallons, 72% domestic and 28% industrial.

INDUSTRIAL SUPPLIES

Westinghouse Foundries Co. and Linde Air Products Co. have supplementary private systems.

UNIONTOWN CITY, FAYETTE COUNTY

UNIONTOWN WATER COMPANY

Population 1910 census, 13,344; increase since 1900, 6,000. Estimated 1915 population, 19,344a.

LOCATION

County seat, in central Fayette County near headwaters of Redstone Creek; on Pennsylvania R. R., Baltimore & Ohio R. R. and West Penn Rys. Built-up section is hilly; range of elevations, 947 to 1,198.

INDUSTRIES

Coal mining and coke manufacturing. Enamel works, radiator plant, brake shoe and foundry plant, three breweries, three distilleries and planing mills.

WATER SUPPLY

Uniontown Water Co., incorporated 1883 for Uniontown Borough and vicinity.

SOURCE AND COLLECTION

Three tributaries of Redstone Creek, flowing from Chestnut Ridge. In dry seasons supply supplemented by connection with Trotter Water Co.'s line.

(1) Hutchinson Run; three reservoirs, 4 miles south of city.

Name	Elevation (feet)	Capacity (gals.)
Upper,	1,421	85,000,000
Middle,	1,346	40,000,000
Lower,	1,294	12,000,000

Watershed area 4.7 square miles.

(2) Bennington Spring Run; 1,500,000 gallon reservoir, 1 mile east of Hopwood, at elevation 1,317; watershed area 1.4 square miles.

(3) Cool Spring Run, tributary of Shutes Run; two storage reservoirs in tandem, 3.5 miles east of city; capacity of upper 23,750,000 gallons, at elevation 1,361, and of lower 2,500,000 gallons, at elevation 1,275. Total watershed area 3.9 square miles.

DISTRIBUTION

Connection to Trotter Water Co.'s lines by 6-inch main at Crossland and 10-inch main near Beeson coke works, on Cool Spring line.

From (1) by gravity through 10-inch and 8-inch mains down valley from lower reservoir.

From (2) by gravity through 8-inch main down valley to connection with 8-inch main from Hutchinson supply.

From (3) by gravity through two 10-inch mains, reducing to 8-inch.

Pressures 40 to 140 pounds. Distributing mains as follows:

Size (inches),	20	14	12	10	8	6	4	2 and 3	Total
Length (miles),	0.05	0.1	0.9	6.7	10.3	4.5	22.2	2.8	47.55
Per cent.,			2.0	14.0	22.0	9.0	47.0	6.0	100

CONSUMPTION

Supply to 20,000 people; 3,294 taps, 1,100 metered; 6 along supply main at village of Hopwood, 2 miles east of city. Average daily consumption 2,500,000 gallons, 60% domestic and 40% industrial; measured by weir and meter. Supplies Baltimore & Ohio R. R., enamel works, radiator works and plant of American Brake Shoe and Foundry Company.

URSINA BOROUGH, SOMERSET COUNTY

PRIVATE SUPPLY

Population 1910 census, 338; decrease since 1900, 85. Estimated 1915, 300a.

LOCATION

Southwestern Somerset County, along Laurel Hill Creek, 1 mile above Confluence; on Baltimore & Ohio R. R. and terminus of Ursina & North Fork Ry. Agricultural district.

WATER SUPPLY

Private system of W. E. VanSickel, installed in 1907.

SOURCE AND COLLECTION

Spring on hillside south of creek. Flow reported to be constant. Water hard.

DISTRIBUTION

By gravity through 1½-inch pipe 850 feet in length; pressure 8 pounds.

CONSUMPTION

Supply to 34 people; 6 taps. Stated average daily consumption 2,000 gallons, all domestic. No means of measurement.

WAYNESBURG, EAST WAYNESBURG BOROUGH AND WEST WAYNESBURG VILLAGE (FRANKLIN TWP.), GREENE COUNTY

WAYNESBURG WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Waynesburg,	3,545	1,001	3,500
East Waynesburg,	906	(Inc. 1901)	500
West Waynesburg,			500b

LOCATION

County seat, in northern central Greene County, along South Fork of Ten Mile Creek; terminus of Waynesburg & Washington R. R.

INDUSTRIES

Shovel works, two machine shops and milling company. Seat of Waynesburg College.

WATER SUPPLY

Waynesburg Water Co., incorporated 1886 for Waynesburg and vicinity.

SOURCE AND COLLECTION

South Fork, Ten Mile Creek; dam just below mouth of Browns Creek forms intake; pumping station on north bank and 1 mile west of Waynesburg. Two 8-inch pipes to mechanical filter plant having two 500,000 gallon units, and 75,000 gallon filtered water basin. Water pumped through 10-inch force main into 1,000,000 gallon reservoir, on hill near northwest corner of Waynesburg. Pumping equipment a centrifugal pump, 2,000,000 gallon Worthington, a 250,000 gallon Smith-Vaile used as auxiliary, and two 100 hp. Gary water tube boilers. Water medium hard.

Auxiliary supply secured in dry seasons from drilled wells, one at pumping station, other at brewery and cold storage plant.

DISTRIBUTION

By gravity through 6-inch and 8-inch mains; pressure from 90 to 165 pounds. Reservoir can be used as equalizer. Distribution mains as follows:

Size (inches),	10	8	6	4	Total
Length (miles),	1.2	0.4	2.3	7.4	11.3
Per cent.,	11	4	20	65	100

Forty-five fire hydrants in Waynesburg and 11 in East Waynesburg.

CONSUMPTION

	Waynesburg	East Waynesburg	Total
Population supplied,	3,500	500	4,000
Number of domestic taps,	681	105	786
Number of industrial taps,	4	0	4
Meters,	685	105	790

Total average daily consumption 90,000 gallons, 6,700 industrial, measured by meters. Supplies all industries and the railroad.

WEST NEWTON BOROUGH, WESTMORELAND COUNTY

WEST NEWTON WATER COMPANY OF WEST NEWTON

Population 1910 census, 2,880; increase since 1900, 413. Estimated 1915, 3,000a.

LOCATION

Southwestern Westmoreland County, along east bank of Youghiogheny River; on Pittsburgh & Lake Erie R. R. and Baltimore & Ohio R. R. Range of elevation in built-up portion 150 feet.

INDUSTRIES

Bituminous coal mining; radiator and boiler works, nipple and tool plant and a mustard manufacturing plant.

WATER SUPPLY

West Newton Water Co. of West Newton, incorporated 1897 for West Newton Borough as Robbstown Water Co. of West Newton, name changed in 1893; main part of works built 1907.

SOURCE AND COLLECTION

Eight 6-inch drilled wells, about 200 feet deep, and several hundred feet from river bank, near southern limits of borough. Water pumped from wells by air-lift to pump house, thence through 6-inch force main to 1,000,000 gallon distributing reservoir on hilltop east of borough; 800 feet of 8-inch and 3,300 feet of 6-inch pipe. Pumping equipment a 288,000 gallon Ramsey pump and a Gould pump of same capacity. Water soft.

DISTRIBUTION

By gravity through 10-inch main reducing in size; pressures 60 to 135 pounds; 5.3 miles distributing mains, 4-inch to 10-inch, 54% 6-inch; 52 fire hydrants.

CONSUMPTION

Supply to 2,000 people; 400 taps, 225 metered; 4 industrial. Total average daily consumption 150,000 gallons; 100,000 domestic and 50,000 industrial; measured by pump displacement. Metered consumption 50,000 gallons domestic and 50,000 gallons industrial. Furnishes partial supply to the two industrial plants, which have private drilled wells.

WILKINSBURG AND TERRITORY EAST OF PITTSBURGH, ALLEGHENY COUNTY

PENNSYLVANIA WATER COMPANY

Source of supply in Lower Allegheny Sub-basin, Section No. 18 (q. v.).

SECTION NO. 20

OHIO RIVER

MAIN OHIO SUB-BASIN

DESCRIPTIONS OF WATER SUPPLY SYSTEMS

Preceded by

Table of Public Water Supplies

Table of Railroad Water Supplies

Table of Industrial Water Supplies (Miscellaneous Companies)

Table of Industrial Water Supplies (Coal Companies)

SECTION NO. 20

OHIO RIVER—MAIN OHIO SUB-BASIN

GENERAL DESCRIPTION

LOCATION AND EXTENT

This section is in the western part of Pennsylvania, along the entire western boundry of the State, except a small part in the Lake Erie Basin in the north, and west of the Allegheny and Monongahela sub-basins.

It is triangular shaped, with its base 140 miles long north and south on the State line and 40 miles greatest width, having an area of 3,072 square miles, and drained by the Ohio River and its tributaries, some of which join that river in West Virginia. It includes all of Beaver and Lawrence counties, the larger part of Mercer, Butler and Washington counties, and parts of Crawford, Venango, Allegheny and Greene counties.

SURFACE CHARACTERISTICS

It is in the Allegheny plateau region, with broad level terraces along main rivers, and broken, hilly country near the headwaters of streams. The terminal moraine crosses the section from the southern part of Lawrence county northward, on the boundary between Mercer and Butler counties. The larger part lies north of the Ohio River, and is drained into it through the Beaver River. The southern part drains through Raccoon Creek, flowing north, and Buffalo Creek and Wheeling Creek, flowing west, entering the Ohio in West Virginia. The principal tributaries of the Beaver River are the Shenango River and Connoquenessing Creek.

POPULATION

The population in 1910 was over 486,000, an increase of 33% since 1900. The density of population is 158 per square mile, varying from 38 to 40 in the extreme northern and southern portions to 177 in Beaver County and 434 in Allegheny County. The urban population is 44%.

RESOURCES AND INDUSTRIES

The principal industries are steel, iron and metal works along Beaver and Ohio rivers. Bituminous coal, oil and gas are found throughout the section. The portion south of the Ohio River is devoted principally to agriculture, coal mining and oil and gas production. Cement, glass, clay, brick, pottery and porcelain works predominate in the portion north of the Ohio River. A large number of manufacturing plants of varied character are found in the large towns, while the banks of the Ohio River are lined with great iron and steel works. Farming is carried on in the whole section.

WATER SUPPLY

In the portion north of the Ohio River, with the exception of the Connoquenessing Creek Valley, the water supply is decidedly inadequate, particularly in the valleys of the Shenango and Beaver rivers. There are excellent opportunities for water storage in this section; one large storage basin, on the headwaters of the Shenango River is planned by the State. South of the Ohio River several large and many smaller streams are heavily drawn upon and are polluted by coal mine and oil wastes. The Beaver and Ohio rivers, though highly polluted with manufacturing wastes, are used to a great extent for water supply, being either filtered or taken through wells along the river banks fed by infiltration.

Springs and wells are used extensively for smaller supplies throughout this region, there being 30 such sources as against 19 surface water sources among public systems. Wells are also numerous, used for private mining and other industrial supplies.

This section stands third as regards total water consumption and fourth as to intensity of consumption per square mile. The total consumption reported is more than 432,000,000 gallons, of which 7% is used domestically; of the 93% of industrial consumption, 1.0% is for coal mines, 3% for railroads and the rest for miscellaneous industries, principally iron and steel. Of the water supplied by public systems 28% is for industrial use, the greatest part of which comes from the Beaver and Ohio rivers, along which are the manufacturing cities and towns.

The aggregate population served by water supply systems is nearly 263,500. There are two cities in this section, both having incorporated systems, and of the 54 boroughs supplied, one-third have municipal systems. The largest municipal plant is that of Sewickley Borough. There are five incorporated systems supplying more than one community, the largest of which covers one city, 16 boroughs and 3 villages, and has a consumption of nearly 3,000,000 gallons.

The largest industrial concerns having private supplies are as follows:

	Total consumption (gallons daily)	From Ohio River (per cent.)	From Shenango River (per cent.)
Carnegie Steel Co. (8 plants),	112,500,000	22	78
Jones & Laughlin Steel Co.,	68,000,000	100	----------
Pittsburgh Crucible Steel Co.,	18,000,000	100	----------
Pressed Steel Car Co.,	15,500,000	100	----------
American Steel & Wire Co.,	15,000,000	----------	100
Sharon Steel Hoop Co.,	15,000,000	----------	100
American Sheet & Tin Plate Co.,	14,000,000	----------	100

This Commission has published a report on a large projected regulating reservoir on the Shenango River, and the Legislature has authorized its construction. This report explains the inadequacy of water supply in the Shenango and Beaver rivers at time of low flow, and shows that at times the temperature of the water reaches 117 degrees as a result of industrial use for cooling.

The following tables give a summary of the water supplies in this section, both domestic and industrial, after which are detailed descriptions of the water supply systems arranged alphabetically according to places supplied.

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 20.

Place	County	Company	Population		City		Borough			Village	
			1915	Supplied	Company	Municipal	Company	Municipal	Private	Company	Private
Aliquippa,	Beaver,	Municipal,	2,200	2,200				1			
Ambridge,	Beaver,	Municipal,	6,000	6,000				1			
Baden,	Beaver,	Municipal,	800	600				1			
Beaver,	Beaver,	Municipal,	4,000	3,500				1			
Beaver County Home,	Beaver, Moon Twp.,	Private,	(55)	(55)							
Beaver Falls,	Beaver,	Beaver Valley W. Co.,	38,165b	34,775	1						
Bridgewater,	Beaver,										
College Hill,	Beaver,										
East Rochester,	Beaver,										
Eastvale,	Beaver,										
Fallston,	Beaver,										
Freedom,	Beaver,										
New Brighton,	Beaver,										
Patterson Heights,	Beaver,										
Rochester,	Beaver,										
Butler,	Butler,	Butler W. Co.,	25,250	20,000			1				
North Butler,	Butler, Butler Twp.,									—	
Lyndora,	Butler, Butler Twp.,									—	
Butler,	Butler,	Citizens Mutual W. Asso.,		800					1		
		Springdale Mutual W. Asso.,		1,625					1		
		Private, S. B. Cross,		650					1		
		Private, W. B. McGeary,		1,300					1		
		Private, J. W. McKee,		30					1		
Butler County Home,	Butler, Butler Twp.,	Private,	(115b)	(115)							
Canonsburg,	Washington,	North Strabane W. Co.,	7,000	4,000			1				
Claysville,	Washington,	Municipal,	1,100	300				1			
Colona,	Beaver, Moon Twp.,	Allaire W. Co.,	500	500						1	
Conway,	Beaver,	Municipal,	1,600b					1			
Coraopolis,	Allegheny,	Municipal,	6,000	5,500				1			
East Butler,	Butler, Summit Twp.,	East Butler W. Co.,	600	500						1	
Ellwood City,	Lawrence,	Ellwood W. Co.,	8,200	6,500			1				
Burnstown,	Lawrence, Wayne Twp.,									—	
Evansburg,	Butler,	Municipal,	1,350	1,200				1			
Greenville,	Mercer,	Greenville W. Co.,	7,500	7,500			1				
Grove City,	Mercer,	Municipal,	5,000	4,500				1			

Haysville,	Allegheny,	Haysville W. Co.,	300	300			1			
Koppel,	Beaver,	Koppel W. Co.,	500	500			1			
Leetsdale,	Allegheny,	Edgeworth W. Co.,	4,500	3,358			1			
Edgeworth,	Allegheny,						—			
Fairoaks,	Allegheny, Leet Twp.,								—	
Linesville,	Crawford,	Bunday's W. Co.,	1,000	800			1			
Mars,	Butler,	Municipal,	1,500	1,000				1		
McDonald and adjacent Townships	Washington,	Citizens W. Co. of McDonald,	2,576	6,000			1			
McKees Rocks,	Allegheny,	Ohio Valley W. Co.,	17,000	40,000			1			
McKees Rocks, suburbs of	Allegheny,						—			
Avalon,	Allegheny,		4,500				—			
Bellevue,	Allegheny,		8,500				—			
Ben Avon,	Allegheny,		2,200				—			
Emsworth,	Allegheny,		1,800				—			
Westview,	Allegheny,		1,800				—			
East Bellevue,	Allegheny, Ross Twp.,		1,500						—	
Mercer,	Mercer,	Mercer W. Co.,	2,200	2,000			1			
Midland,	Beaver,	Midland W. Co.,	5,000	4,000			1			
Monaca,	Beaver,	Municipal,	3,600	3,000				1		
Monaca Heights,	Beaver, Moon Twp.,	Private, McKay Brothers,	100b	70						1
New Castle,	Lawrence,	City of New Castle W. Co.,	40,351x	38,700	1					
New Sheffield,	Beaver, Hopewell Twp.,	Hopewell Township W. Co.,	106	90					1	
New Wilmington,	Lawrence,	New Wilmington W. S. Co.,	750	600			1			
Pulaski,	Lawrence, Pulaski Twp.,	Pulaski W. Co.,	325	75					1	
Sewickley,	Allegheny,	Municipal,	5,410	5,410				1		
Osborne,	Allegheny,							—		
Sharon,	Mercer,	Sharon W. W. Co.,	18,677x	30,000			1			
Farrell,	Mercer,		12,500				—			
Slippery Rock,	Butler,	Municipal,	850	800				1		
		Private, Normal School,	(700b)	(700)						
South Heights,	Beaver,	Crescent Beach W. Co.,	300	200			1			
State Hospital for Insane, Dixmont	Allegheny, Kilbuck Twp.,	Private,	(1,200)	(1,200)						
State Training School, Morganza	Washington,	Private,	(600)	(600)						
Sharpsville,	Mercer,	Municipal,	3,800b	3,000				1		
Stoneboro,	Mercer,	Municipal,	1,200	700				1		
Volant,	Lawrence,	Private,	200b	100					1	
Wampum,	Lawrence,	Municipal,†	1,000					1		
Washington,	Washington,	Citizens W. Co. of Washington, Pa.	21,400	11,100			1			
East Washington,	Washington,						—			
West Middlesex,	Mercer,	Municipal,	1,200b	700				1		
West Pittsburgh,	Lawrence, Taylor Twp.,	West Pittsburgh W. Co.,	750	712					1	
Woodlawn,	Beaver,	Woodlawn W. Co.,	8,000	7,500			1			
Zelienople,	Butler,	Municipal,	1,600	800				1		

bEstimated by Water Supply Commission.
xU. S. Census.
†Used for fire protection only.

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 20—Continued

Place	County	Company	Supply: Source: Surface	Supply: Source: Ground	Supply: Source: Combined	Supply: Method: Gravity	Supply: Method: Pumped	Supply: Method: Combined	Consumption (average daily): Domestic (gals.)	Consumption (average daily): Industrial (gals.)	Consumption (average daily): Total (gals.)	Consumption (average daily): Per capita (gals.)
Aliquippa,	Beaver,	Municipal,	---	1	---	---	1	---	34,000	285,400	319,400	15d
Ambridge,	Beaver,	Municipal,	---	1	---	---	1	---	242,000	60,000	302,000	50t
Baden,	Beaver,	Municipal,	---	1	---	---	1	---	60,000a	---	60,000a	---
Beaver,	Beaver,	Municipal,	---	1	---	---	1	---	765,000	85,000	850,000	243t
Beaver County Home,	Beaver, Moon Twp.,	Private,	---	---	---	---	---	---	1,600a	---	1,600a	---
Beaver Falls,	Beaver,											
Bridgewater,	Beaver,											
College Hill,	Beaver,											
East Rochester,	Beaver,											
Eastvale,	Beaver,	Beaver Valley W. Co.,	1	---	---	---	1	---	4,640,000	1,160,000	5,800,000	167t
Fallston,	Beaver,											
Freedom,	Beaver,											
New Brighton,	Beaver,											
Patterson Heights,	Beaver,											
Rochester,	Beaver,											
Butler,	Butler,											
North Butler,	Butler, Butler Twp.,	Butler W. Co.,	1	---	---	---	1	---	1,040,000	1,560,000	2,600,000	130t
Lyndora,	Butler, Butler Twp.,											
		Citizens Mutual W. Asso.,	---	1	---	---	1	---	7,500	---	7,500	9d
		Springdale Mutual W. Asso.,	---	1	---	---	1	---	65,000b	---	65,000b	---
Butler,	Butler,	Private, S. B. Cross,	---	1	---	---	1	---	6,500	---	6,500	10t
		Private, W. B. McGeary,	---	1	---	---	1	---	20,000a	---	20,000a	---
		Private, J. W. McKee,	---	1	---	---	1	---	400a	---	400a	---
Butler County Home,	Butler, Butler Twp.,	Private,	---	---	---	---	---	---	3,000b	---	3,000b	---
Canonsburg,	Washington,	North Strabane W. Co.,	1	---	---	---	1	---	520,000	280,000	800,000	200t
Claysville,	Washington,	Municipal,	---	1	---	---	1	---	3,300	---	3,300	11d
Colona,	Beaver, Moon Twp.,	Allaire W. Co.,	1	---	---	---	1	---	416,000a	---	416,000a	---
Conway,	Beaver,	Municipal,	---	1	---	---	1	---	---	---	---	---

Coraopolis,	Allegheny,	Municipal,	---	1	---	---	1	---	1,450,000a	50,000a	1,500,000a	------
East Butler,	Butler, Summit Twp.,	East Butler W. Co.,	---	1	---	---	1	---	20,000	----------	20,000	40d
Ellwood City,	Lawrence,	Ellwood W. Co.,	1	---	---	---	1	---	492,000	1,746,000	2,238,000	343t
Burnstown,	Lawrence, Wayne Twp.,	Municipal,	---	1	---	---	1	---	20,000a	5,000a	25,000a	------
Evansburg,	Butler,	Greenville W. Co.,	1	---	---	---	---	1	----------	----------	700,000a	------
Greenville,	Mercer,	Municipal,	---	1	---	---	1	---	359,000	1,000	360,000	80t
Grove City,	Mercer,	Haysville W. Co.,	1	---	---	---	---	1	6,800	----------	6,800	23d
Haysville,	Allegheny,	Koppel W. Co.,	1	---	---	1	---	---	18,000a	12,000a	30,000a	------
Koppel,	Beaver,											
Leetsdale,	Allegheny,	Edgeworth W. Co.,	---	1	---	---	---	1	88,300	81,700	170,000	26d
Edgeworth,	Allegheny,											
Fairoaks,	Allegheny, Leet Twp.,	Bunday's W. Co.,	---	1	---	---	---	1	58,800a	1,200a	60,000a	------
Linesville,	Crawford,	Municipal,	---	1	---	---	1	---	32,000	8,000	40,000	40t
Mars,	Butler,	Citizens W. Co. of McDonald,	1	---	---	---	1	---	250,000	251,000	501,000	83t
McDonald and adjacent Townships	Washington,											
McKees Rocks,	Allegheny,											
McKees Rocks, suburbs of	Allegheny,											
Avalon,	Allegheny,	Ohio Valley W. Co.,	1	---	---	---	1	---	3,866,000	430,000	4,296,000	107t
Bellevue,	Allegheny,											
Ben Avon,	Allegheny,											
Emsworth,	Allegheny,											
Westview,	Allegheny,											
East Bellevue,	Allegheny, Ross Twp.,	Mercer W. Co.,	---	1	---	---	1	---	250,000a	----------	250,000a	------
Mercer,	Mercer,	Midland W. Co.,	1	---	---	---	1	---	370,000	----------	370,000	92d
Midland,	Beaver,	Municipal,	1	---	---	---	1	---	159,000	53,000	212,000	71t
Monaca,	Beaver,	Private, McKay Brothers,	---	1	---	---	1	---	2,000b	----------	2,000b	------
Monaca Heights,	Beaver, Moon Twp.,	City of New Castle W. Co.,	1	---	---	---	1	---	2,740,000	860,000	3,600,000	93t
New Castle,	Lawrence,	Hopewell Township W. Co.,	---	1	---	---	1	---	3,000	----------	3,000	33d
New Sheffield,	Beaver, Hopewell Twp.,	New Wilmington W. S. Co.,	---	1	---	---	---	1	18,000b	2,000b	20,000b	------
New Wilmington,	Lawrence,	Pulaski W. Co.,	---	1	---	1	---	---	2,300b	300b	2,600b	------
Pulaski,	Lawrence, Pulaski Twp.,	Municipal,	1	---	---	---	1	---	1,170,000	----------	1,170,000	220d
Sewickley,	Allegheny,											
Osborne,	Allegheny,	Sharon W. W. Co.,	1	---	---	---	1	---	2,465,000	200,000	2,635,000	89t
Sharon,	Mercer,											
Farrell,	Mercer,	Municipal,	---	1	---	---	1	---	12,800	----------	12,800	16d
Slippery Rock,	Butler,	Private, Normal School,	---	---	---	---	---	---	8,000a	----------	8,000a	------
		Crescent Beach W. Co.,	---	1	---	---	---	1	6,000b	----------	6,000b	------
South Heights,	Beaver,	Private,	---	---	---	---	---	---	350,000	300	350,300	292d
State Hospital for Insane, Dixmont	Allegheny, Kilbuck Twp.,	Private,	---	---	---	---	---	---	160,000a	----------	160,000a	------
State Training School, Morganza	Washington,	Municipal,	1	---	---	1	---	---	100,000	----------	100,000	33d
Sharpsville,	Mercer,	Municipal,	---	1	---	1	---	---	21,000b	----------	21,000b	------
Stoneboro,	Mercer,	Private,	---	1	---	1	---	---	300a	----------	300a	------
Volant,	Lawrence,	Municipal,†	---	1	---	---	1	---	†	----------	†	------
Wampum,	Lawrence,	Citizens W. Co. of Washington, Pa.	1	---	---	---	1	---	372,700	870,600	1,243,300	112t
Washington,	Washington,											
East Washington,	Washington,											

OPERATING PUBLIC WATER SUPPLIES, SECTION NO. 20—Continued

Place	County	Company	Supply						Consumption (average daily)			
			Source			Method						
			Surface	Ground	Combined	Gravity	Pumped	Combined	Domestic (gals.)	Industrial (gals.)	Total (gals.)	Per capita (gals.)
West Midlesex,	Mercer,	Municipal,	---	1	---	---	---	1	21,000b	----------	21,000b	------
West Pittsburgh,	Lawrence, Taylor Twp.,	West Pittsburgh W. Co.,	1	---	---	---	1	---	30,000	35,000	65,000	91t
Woodlawn,	Beaver,	Woodlawn W. Co.,	---	1	---	---	1	---	239,000	411,300	680,300	91t
Zelienople,	Butler,	Municipal,	1	---	---	---	1	---	90,000	30,000	120,000	150t

aEstimated by water companies.
bEstimated by Water Supply Commission.
dDomestic.
tTotal.
†Used for fire protection only.

RAILROAD WATER SUPPLIES, SECTION NO. 20

PENNSYLVANIA

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Conemaugh Div'n				
Butler,	Butler Water Company,			47,000

WAYNESBURG & WASHINGTON

Washington,	Citizens Water Co.,			9,100

PENNSYLVANIA LINES WEST OF PITTSBURGH

Northwest System				
Allegheny,	Pittsburgh Municipal,			150,000
	Ohio River,	Pumped,	1,500,000	
Conway,	Ohio River,	Pumped,	2,000,000	
	Beaver Valley W. Co.,			77,600
Edgeworth,	Edgeworth Water Co.,			47,600
Homewood,	Small stream,	Gravity,	50,000	
Jamestown,	Small stream,	Pumped,	150,000	
Leesburg,	Neshannock Creek,	Pumped,	150,000	
Linesville,	Stream,	Pumped,	200,000	
Mahoningtown,	Mahoning River well,	Gravity,	750,000	
Midland,	Pitts. Crucible Steel,		30,000	
New Castle, West Side,	Shenango River,	Pumped,	250,000	
New Castle, East Side,	City of New Castle Water Company,			50,000
New Galilee,	Little Beaver River,	Pumped,	250,000	
Sharon,	Shenango River,	Pumped,	300,000	
Pittsburgh,	Municipal Works,			16,800
Thompson,	Beaver River,	Pumped,	250,000	
Wampum,	Spring & small stream,	Gravity,	750,000	
Wilmington Jct.,	Spring,	Gravity,	50,000	
Southwest System				
Canonsburg,	North Strabane W. Co.,			7,500
Bridgeville,	So. Pittsburgh W. Co.,			22,600
Carnegie,	So. Pittsburgh W. Co.,			227,700
Houston,	Chartiers Creek,	Pumped,	63,600	
McDonald,	Citizens Water Co.,			138,000
Primrose,	Citizens Water Co.,			4,000
Raccoon,	Raccoon Creek,	Pumped,	63,600	
Scully,	Monongahela W. Co.,		5,000	
Sheridan,	So. Pittsburgh W. Co.,			46,300
Washington,	Citizens Water Co.,			73,000

BALTIMORE & OHIO

Butler,	Butler Water Co.,			40,000
	Spring,	Gravity,	4,000	
Downieville,	Stream,	Pumped,	175,000	
Ellwood City,	Ellwood Water Co.,			12,000
Fombell,	Stream,	Pumped,	165,000	
Hecks,	Spring,	Gravity,	4,000	
New Castle Jct.,	City of New Castle Water Company,			525,000
Renfrew,	Spring,	Gravity,	4,000	

BESSEMER & LAKE ERIE

Annandale,	Springs,	Gravity,	7,000	
Branchton,	McDonald Run,	Pumped,	150,000	
Butler Transfer,	Butler Water Co.,			90,000
Euclid,	Wells,	Pumped,*		

RAILROAD WATER SUPPLIES, SECTION NO. 20—Continued

BESSEMER & LAKE ERIE—Continued

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Greenville,	Shenango River,	Pumped,	1,150,000	
Grove City,	Well,	Pumped,	160,000	
Hallston,	Wells,	Pumped,*		
Hartstown,	Springs,	Gravity,*		
Houseville,	Wells,	Pumped,	150,000	
K. O. Junction,	Old Canal,	Pumped,	90,000	
Meharg,	Thorn Creek,	Pumped,*		
Mercer Junction,	Otter Creek,	Pumped,	100,000	
Queen Junction,	Wells,	Pumped,	160,000	
Shenango,	Shenango River,	Pumped,	50,000	

BUFFALO, ROCHESTER & PITTSBURGH

Butler Junction,	Butler Water Co.,			145,000
New Castle,	New Castle W. Co.,			260
New Castle,	Lehigh Portland Cement Co.		10,000	
Noeline,	East Butler W. Co.,			50

ERIE

Meadville Div'n				
Shenango,	Dug well,	Pumped,	250,000	
Stony Point,	Well,	Pumped,	70,000	

PITTSBURGH & LAKE ERIE

Aliquippa,	Well in river,	Pumped,	29,700	
College,	Beaver River,	Pumped,	74,000	
Ellwood City,	Ellwood City W. Co.,			3,800
Groveton,	Ohio River,	Pumped,	158,700	
McKees Rocks,	Wells in river,	Pumped,	1,297,000	
New Castle,	City of New Castle Water Co.,			16,000
New Castle Junction,	Well in river,	Pumped,	261,900	
Pittsburgh,	Ohio River,	Pumped,	500,000	
Rock Point,	Beaver River,	Pumped,	98,300	
Stobo,	Ohio River,	Pumped,	167,100	

MERCER VALLEY

Pittsburgh,	Carnegie Steel Co.,		30,000	

MONTOUR

Groveton,	P. & L. E. R. R.,		10,000	
Imperial,	Peoples Gas Co.,		15,000	
Moon Run,	South Penn Oil Co.,		300	
Montour Junction,	Wells,	Pumped,	40,000	
Coraopolis,	Municipal Works,			7,000

PITTSBURGH, LISBON & WESTERN

New Galilee,	Well,	Pumped,	8,000	

RAILROAD WATER SUPPLIES, SECTION NO. 20—Continued

PITTSBURGH & OHIO VALLEY

Station	Source of supply	Method of supply	Average daily consumption	
			R. R.	Public
Pittsburgh,	Carnegie Steel Co.,		60,000	
VALLEY CONNECTING				
Sharon,	Shenango River,	Pumped,	3,100	
WESTERN ALLEGHENY				
Queen Junction,	Muddy Creek,	Pumped,	40,000	
West Pittsburgh,	McKees Run,	Pumped,	30,000	
WABASH PITTSBURGH TERMINAL				
Acheson,	Small stream,	Pumped,	30,000	
Avella,	So. Fork, Cross Cr.,	Pumped,	70,000	
Totals,			12,440,300	1,756,250

*Emergency

INDUSTRIAL WATER SUPPLIES, SECTION NO. 20 (MISCELLANEOUS COMPANIES)

Does not include all the smaller companies

Place	Company	Source	Method	Industrial consumption, (gallons per day)	Daily amount of product	Returned to stream (%)	Increase in temp., °F.
Ambridge, Beaver County,	American Bridge Co.,	Drilled wells,	Pumped,	2,000,000	590 tons	100	25
Beaver Falls, Beaver County	Ingram-Richardson Mfg. Co.,	Private supply,	Pumped,				
		Beaver Val. W. Co.,		(19,000)			
	The Standard Scale & Supply Co.,	Drilled wells,		drinking			
		Beaver Val. W. Co.,		(35,600)			
	Armstrong Cork Co.,	Drilled wells,		97,000			
		Beaver Val. W. Co.,		(83,000)			
	Pittsburgh Seamless Tube Co.,	Beaver River,	Pumped,	120,000			
		Spring,		drinking			
	Standard Gauge Steel Co.,	Beaver River,	Pumped,	s 220,000		50	yes
Butler, Butler County,	Forged Steel Wheel Co.,	Drilled wells,	Pumped,		1,230 tons	20	20
		Butler Water Co.,					
	Standard Steel Car Co.,	Drilled wells,		360,000	60 cars	0	0
		Butler Water Co.,		(90,000)			
Carnegie, Allegheny County,	Superior Steel Co.,	Chartiers Creek,	Pumped,	2,000,000	220 tons	75	0
	McClintic-Marshall Cons. Co.,	Drilled wells,	Pumped,	s 35,600	65 tons	0	0
		So. Pittsburgh W. Co.,		(20,000)			
Canonsburg, Washington County	Fort Pitt Bridge Works of Pittsburgh, Pa.	Cistern,	Pumped,				
		3 drilled wells,	Pumped,	40,000	115 tons	75	0
		Chartiers Creek,					
		N. Strabane W. Co.,	Pumped,	s (50,000)		1	0
Colona, Beaver County,	Colonial Steel Co.,	Ohio River,	Pumped,	1,184,000	45 tons	80	0
East Butler, Butler County,	Valvoline Oil Ref. Co.,	8 drilled wells,	Pumped,				
		Bonnie Brook,	Pumped,				
	Iron & Brass Bed Works,	8 drilled wells,	Pumped,				
		Bonnie Brook,	Pumped,				
Ellwood City, Lawrence County	Shelby Steel Tube Co.,	Ellwood Water Co.,		(1,330,000)	35 tons	75	0
	Ellwood Stone Co.,	Small run,	Gravity,	s 800	1½ cars	0	0
Fallston, Beaver County,	Fallston Fire Clay Co.,	Brady's Run (by well),	Pumped,	5,000	40,000 brick	0	0
Farrell, Mercer County,	American Steel & Wire Co.,	Shenango River,	Pumped,	14,900,000	475 tons	98	32
		Carnegie Steel Co.,		100,000			

Farrell, Mercer County,	Carnegie Steel Co. (Steel Wks. & Furnaces)	Shenango River,	Pumped,	20,500,000	1090 tons pig	99	20
				2,200,000	1,600 steel		
				8,300,000	2,025 rolled & general		
		Drilled wells,	Pumped,	66,000			
				drinking			
	Other industries,*	Shenango River,	Pumped,	27,300,000			
Greenville, Mercer County,	Carnegie Steel Co. (Steel Works),	Shenango River,	Pumped,	1,418,000	338 tons	88	16
		Drilled wells,	Pumped,	700			
	Other industries,*	Shenango River,	Pumped,	1,800,000			
Midland, Beaver County,	Pittsburgh Crucible Steel Co.,	(See Midland, Sec. 20),		18,000,000	1,000 tons	90	25
	Treadwell Construction Co.,	Pitts. Crucible Steel Co.,		10,000			
	Pittsburgh Iron & Steel Fdy. Co.,	Pitts. Crucible Steel Co.,		5,000			
McKees Rocks, Allegheny County	Fort Pitt Malleable Iron Co.,	Chartiers Creek,	Pumped,	75,000	83 tons	25	0
	Lockhart Iron & Steel Co.,	Ohio River,	Pumped,	1,164,840	278 tons	85	30
	Carnegie Steel Co. (Schoen Steel Wheel Wks.)	5 drilled wells,		258,000	274 tons	90	15
		Ohio Val. Water Co.,		(2,700)			
	Pressed Steel Car Co. (two plants)	Ohio River,	Pumped,	15,500,000	130 cars, etc.	75	5
Neville Island, Allegheny County	Carnegie Steel Co. (Neville Furnaces)	Ohio River,	Pumped,	4,500,000	425 tons	98	
New Brighton, Beaver County	Standard Sanitary Mfg. Co.,	Beaver Val. Water Co.,		(250,000)	2,000 castings	50	0
New Castle, Lawrence County	Carnegie Steel Co. (Steel Wks. & Furnaces)	Shenango River,	Pumped,	28,130,000	1,350 tons pig iron		
				11,870,000	2,000 tons rolled & general	85	25
		The City of New Castle Water Company		(10,800)			
		Neshannock Creek,	Pumped,	9,000,000	400 t. iron	85	25
	American Sheet & Tin Plate Co. (2 plants)	Shenango River,	Pumped,	14,000,000	620 tons	90	yes
		Big Run,					
	Other industries,*	Shenango River,	Pumped,	36,500,000			
Pittsburgh City, Allegheny County	Carnegie Steel Co.						
	Painter Steel Works,	Ohio River,	Pumped,	6,000,000	400 tons	98	10
		Pittsburgh Municipal,		(280,000)	general	95	10
	Edith Furnace,	Ohio River,	Pumped,	4,500,000	375 tons	98	
	McCutcheon Mills,	Ohio River,	Pumped,	10,000,000	430 tons rolled	95	20
		Pittsburgh Municipal,		(200,000)		30	40
	Standard Sanitary Mfg. Co.,	Ohio River, by well,	Pumped,	907,200	52 tons	90	10 to 15
		Pittsburgh Municipal,	(Emergency),	(8,000)			
	Riter-Conley Mfg. Co.,	Ohio River,	Pumped,	500,000		50	0
	Pittsburgh Forge & Iron Co.,	Ohio River,	Pumped,	1,040,000	109 tons	66	0
Sharon, Mercer County,	Sharon Steel Hoop Co.,	Shenango River,	Pumped,	15,000,000	420 tons	100	20
	The Nat'l Malleable Castings Co.,	Sharon Water Wks. Co.,		(200,000)			
		3 drilled wells,	Pumped,	120,000	200 tons	20	yes
	Driggs-Seabury Ordnance Corporation	Shenango River,	Pumped,	250,000		60	
	Other industries,*	Shenango River,	Pumped,	6,600,000			
Sharon, Mercer County,	Carnegie Steel Co. (Steel Wks. & Furnaces)	Shenango River,	Pumped,	1,800,000	260 tons pig	99	20
		Shenango River,		1,500,000	530 tons steel rolled & general		
		Shenango River,		2,700,000			
		Drilled wells,	Pumped,	32,000			

INDUSTRIAL WATER SUPPLIES, SECTION 20 (MISCELLANEOUS COMPANIES)—Continued

Place	Company	Source	Method	Industrial consumption, (gallons per day)	Daily amount of product	Returned to stream (%)	Increase in temp., °F.
Sharpsville, Mercer County,	Several industries,*	Shenango River,	Pumped,	16,400,000			
Washington, Washington County	The Tyler Tube & Pipe Co.,	Small tributary of Chartiers Creek	Pumped,	330,000	51 tons skelp 25 ft. boiler tube	20	15
	Hazel-Atlas Glass Co:						
	No. 1 Plant,	Catfish Creek, Drilled wells,	Pumped,	409,000	60 tons	95	25 to 50
		Citizens Water Co. of Washington		(21,000)			
	No. 2 Plant,	Chartiers Creek,	Pumped,	570,000	95 tons	95	25 to 50
		Citizens Water Co. of Washington		(5,000)			
	Atlas,	Catfish Creek, Drilled wells,	Pumped,	20,000	95 tons	80	20 to 40
		Citizens Water Co. of Washington		(49,000)			
Wampum, Lawrence County,	Crescent Portland Cement Co. (2 plants)	Run trib. to Beaver River,	22,000,000 gal. reservoir	6,000,000			
West Middlesex, Mercer County	United Iron & Steel Co.,	Shenango River,	Pumped to 90,000 tank.				
	Other industries,*	Shenango River,	Pumped,	4,000,000			
Woodlawn, Beaver County,	Jones & Laughlin Steel Co.,	Ohio River,	Pumped,	68,000,000		99	10 to 15
Total from private systems,				371,391,540			

*Data from Pymatuning Swamp Investigation
sWater for steam purposes

INDUSTRIAL WATER SUPPLIES, SECTION 20 (COAL MINING COMPANIES)

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
Allegheny County							
Morgan,	National Mining Co.,	Miller's Run,	Pumped,		s 66,000	4,120	2
		Coal Pit Run,	Gravity,		s 33,000		
Noblestown,	The Fayette Coal Co. (Chalfant Mine)	Springs & wells, Pumped from mine,	Pumped, Filtered,	(1,100 pop.) 5,650	s (37,000)	1,350	1
Oakdale,	Carnegie Coal Co.,	Drilled well,	Pumped to 38,000 gal. tank,		s 36,000	1,380	1
Butler County							
Deegan,	Butts-Cannel Coal Co.,	N. Branch of Slippery Rock Creek	Pumped,		s 40,000	433	2
Lawrence County,							
Drake,	Sharon Coal & Limestone Co. (Mine No. 2)						
Mercer County							
London,	Sharon Coal & Limestone Co. (Mine No. 5)	3 drilled wells,	Pumped to tanks,	140,800 (1,000 pop.)	s 147,700	1,234	5
Butler County							
Redmond,	Sharon Coal & Limestone Co. (Mines No. 3, 4 & 6)						
Mercer County							
Farrell,	Carnegie Steel Co. (Coke Works)	Shenango River,	Pumped,		2,500,000	1,507 coke	1
		Drilled wells,	Pumped,		1,000 drinking		
Grove City,	Westerman-Filer Co. (Diamond Mine No. 3)	Drilled well,	Pumped to tank,		s 36,100	361	1
Pardoe,	Pardoe Coal Co. (Pardoe & Kee Mines)	2 drilled wells,	Pumped to tank,		s 16,600	348	2
Washington County							
Arden,	Meadow Lands Coal Co.,	Arden Creek,	Pumped,		s 15,000	706	1
Avella,	Pittsburgh & Southwestern Coal Co.	South Fork of Cross Creek,	Pumped to 12,500 gal. tank,		s 25,000	387	1
	Meadow Lands Coal Co.,	Avella Creek,	Pumped to 50,000 gal. res.,		s 12,000	563	1
Bulger,	Bulger Block Coal Co.,	2 drilled wells,	Pumped to 4 tanks,	2,600 (250 pop.)	s 10,000	911	1
Burgettstown,	Pittsburgh-Buffalo Co. (Francis Mine)	Harmons Creek,	Pumped to 10,000,000 gal. res.		s 70,000	859	1
Canonsburg,	Pittsburgh-Buffalo Co. (Hazel Mine)	Chartiers Creek, Citizens Water Co., of Canonsburg	Gravity,		s 160,000	2,270	1

INDUSTRIAL WATER SUPPLIES, SECTION 20 (COAL MINING COMPANIES)—Continued

Place	Company	Source	Method	Consumption (gallons per day)		Daily amount of product short tons	Number of collieries supplied
				Domestic	Industrial		
Washington County							
Cherry Valley,	Pittsburgh & Eastern Coal Co.,	Raccoon Creek & tributaries,	Pumped to three 9,000 gal. res.		s 145,600	2,140	3
		Springs,		3,000			
Hickton,	J. H. Sanford Coal Co. (Armide Mine)	Raccoon Creek,	Pumped,		s 40,000	848	1
Manifold,	The Youghiogheny & Ohio Coal Co. (Mines No. 1 & 2)	Drilled well & Manifold Run,	Pumped to tanks,		s 100,000	1,730	2
Meadow Lands,	Meadow Lands Coal Co. (Mine No. 1)	Drilled well,	Pumped,		s 5,000	960	1
Primrose Station,	Carnegie Coal Co.,	Citizens Water Co. of McDonald		(5,000)	s (40,000)	1,745	1
Total from private systems,				151,400	3,453,000		

sWater for steam purposes.

ALIQUIPPA BOROUGH, BEAVER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,743; increase since 1900, 1,123. Estimated 1915, 2,200.

LOCATION

Southeastern Beaver County, along west bank of Ohio River; on Pittsburgh & Lake Erie R. R. and Aliquippa & Southern R. R. Built-up portion on level plateau between hills and river and about 80 feet above river.

INDUSTRIES

Crucible Steel Company of America, steel wire mill, Vulcan Crucible Steel Co., shovel works and brewery.

WATER SUPPLY

Municipal system installed in 1904.

SOURCE AND COLLECTION

Eleven drilled wells 28 feet deep, 4 having 6-inch casing, five 7-inch, and two 12-inch, at head of Crow Island, in Ohio River, opposite southeastern corner of borough. Water collected through 12-inch suction line to pumping station on river bank in borough and pumped through 0.75 mile 8-inch force main direct to system. Pumping equipment 440,000 gallon Smith-Vaile pump, 800,000 gallon Gould pump, both with 8-inch discharge, and 1,000,000 gallon Platt pump. Water medium hard.

DISTRIBUTION

By pumping direct to system, with 8-inch connection to two 100,000 gallon equalizing tanks at central western boundary of borough; 200 feet higher than district supplied; 0.75 mile northwest of pumping station; pressure 90 pounds.

Distributing mains:

Size (inches),	Less than 4	4 to 10	Total
Length (miles),	0.6	3.2	3.8

Twenty-three fire hydrants, 2½-inch.

CONSUMPTION

Supply to 2,200 people through 405 taps, 4 industrial; entirely metered. Average daily consumption 319,400 gallons, 34,000 domestic 285,400 industrial to Mutual Union Brewing Co. Supplies Vulcan Crucible Steel Co. with drinking water.

AMBRIDGE BOROUGH, BEAVER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 5,205 (inc. 1905). Estimated 1915 population, 6,000a.

LOCATION

Southeastern Beaver County, along east bank of Ohio River; northern part of borough is called Economy; on Pennsylvania Lines West of Pittsburgh, and Beaver Valley traction line.

INDUSTRIES

American Bridge Co.'s plant and a machine shop. In Economy, a tube mill, metal moulding plant, sheet and metal works, a planing mill and a brewery.

WATER SUPPLY

Municipal works purchased January 1, 1914, from Harmony Water Co., incorporated 1902 for Harmony Township. In 1910 this company purchased property and franchises of Ambridge Water Co., which had been supplying Ambridge with water purchased from American Bridge Co.'s system, and was incorporated 1903 for Harmony Township by principal stockholders of Ambridge Land Co.

SOURCE AND COLLECTION

Twenty 8-inch drilled wells, 30 feet deep, on river bank in northwestern part of borough; wells connected by 6-inch pipes to two 12-inch suction lines 200 feet to pumping station which contains one 1,300,000 gallon Deming, a 1,300,000 gallon Gould pump and two 125 hp. gas engines. Water pumped through 12-inch force main 7,100 feet east to 200,000 gallon distributing reservoir and 365,000 gallon tank, or may be pumped direct to system through 10-inch branch.

DISTRIBUTION

By gravity through 12-inch main; pressures 70 to 80 pounds. Eight miles distributing mains; 101 fire hydrants, 4-inch and 6-inch.

CONSUMPTION

Supply to 6,000 people, 1,121 taps, 93% metered. Average daily consumption 302,000 gallons, 80% domestic and 20% industrial, measured by pump displacement.

COST AND REVENUE

Total cost of works, $138,000; annual operating expenses, $4,200; gross revenue, $24,000.

INDUSTRIAL

AMERICAN BRIDGE COMPANY

American Bridge Co. has private system for industrial supply. Source three wells, 12 to 15 feet diameter and 35 feet deep, on river bank, with bottom of quartz and sand on top of gravel to act as filter. A 20-inch suction line from one well with 12-inch branches from other wells to pumping station. Water pumped through 12-inch line into a 37,000 gallon tank nearby.

A 12-inch line from tank back into pumping station, where 20 various pumps, mostly Fairbanks-Morse, Worthington or Gould, force water through 12-inch lines to different parts of plant. Pressure 40 pounds. Emergency fire pump is 2,160,000 gallon Fairbanks-Morse.

Average daily industrial consumption 4,800,000 gallons.

CENTRAL TUBE COMPANY

Private system using three drilled wells and also a small amount of water from municipal system.

ECONOMY-AMBRIDGE BREWERY

Private supply by pumping from drilled wells.

BEAVER VALLEY TRACTION COMPANY

Private supply by pumping from two drilled wells.

BADEN BOROUGH, BEAVER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 601; increase since 1900, 174. Estimated 1915, 800a

LOCATION

Southeastern Beaver County, along east bank of Ohio River; on Pennsylvania Lines West of Pittsburgh, and Beaver Valley Traction line. Built-up portion on level stretch about 40 feet above river, between ridge 260 feet high and river; elevation 150 feet.

INDUSTRIES

Residential suburb of Conway and Ambridge; flour mill.

WATER SUPPLY

Municipal works installed in 1907.

SOURCE AND COLLECTION

Six 8-inch drilled wells, 20 feet deep, on river bank at foot of Lessing Street, in northern part of borough. One well opposite pumping station and others downstream from it, the farthest being 900 feet away; estimated yield 100 g. p. m. each. Wells connected by 6-inch pipe to 12-inch suction line to pump well. Water pumped through 8-inch force main direct to system. Pumping equipment 450,000 gallon Smith-Vaile triplex pump driven by 35 hp. gas engine. Water medium hard.

DISTRIBUTION

By pumping direct to system, with 8-inch connection to 60,000 gallon equalizing tank 0.5 mile east, in center of borough; pressures 85 to 107 pounds; 3.5 miles distributing mains, 1-inch to 8-inch; 30 fire hydrants, 6-inch.

CONSUMPTION

Supply to 600 people; 130 taps. Stated average daily consumption 60,000 gallons, all domestic. No means of measurement.

COST AND REVENUE

Total cost of works, $30,000; annual operating expenses $650.

BEAVER BOROUGH, BEAVER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census 3,456, increase since 1900, 1,108. Estimated 1915, 4,000

LOCATION

County seat, central Beaver County, on north Bank of Ohio River and just west of Bridgewater, at junction of Beaver River with that stream; on Pennsylvania Lines West of Pittsburgh, Pittsburgh & Lake Erie R. R. and Beaver Valley Traction Ry. Built-up portion on plateau 60 feet above Ohio River and Bridgewater. Suburban residential district of Pittsburgh. Seat of Beaver College.

WATER SUPPLY

Municipal works built in 1899.

SOURCE AND COLLECTION

Fifteen 6-inch drilled wells, 28 feet deep, in Ohio River, at southeastern part of borough; two wells are 350 feet south of pumping station. Wells connected by 6-inch pipes to 12-inch line, which divides into 10-inch suction to pumps. Water pumped through 10-inch force main direct to system. Pumping equipment two 500,000 gallon Deming pumps and a 1,000,000 gallon Deming pump. Water very hard.

DISTRIBUTION

By pumping direct to system, with 10-inch connection to 1,000,000 gallon equalizing reservoir on hill 1 mile north of pumping station; pressure 100 to 125 pounds; 12 miles distributing mains 8-inch to 4-inch; 44 fire hydrants, 4-inch.

CONSUMPTION

Supply to 3,500 people. Average daily consumption 850,000 gallons, 90% domestic and 10% industrial; measured by pump displacement.

COST AND REVENUE

Total cost of works $90,000; annual operating expense, about $6,000; gross revenue, none, water supplied free by borough.

HISTORICAL

Borough first supplied with water about 1808, when seven men subscribed $50 and put in wooden pipes from springs on hillside north of borough. Later the watershed owned by United States Government, given to borough for water supply. This source used until 1899, from which date present source of supply, Ohio River, was used.

BEAVER COUNTY HOME (MOON TWP.), BEAVER COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 55a

LOCATION

Central Beaver County, along south bank of Ohio River, at mouth of Raccoon creek and opposite United States Government Dam No. 6; post office at Monaca.

WATER SUPPLY

(1) Spring 0.5 mile east of buildings, with 2-inch gravity pipe to buildings for domestic use. Water very soft.

(2) Ohio River well; water pumped by 5 hp. gas engine pump through 4-inch pipe to 7,500 gallon tank north of buildings and 90 feet above. A 2-inch gravity main leads to three fire hydrants

Supply all domestic to 55 people.

BEAVER FALLS CITY, BRIDGEWATER, COLLEGE HILL, EAST ROCHESTER, EASTVALE, FALLSTON, FREEDOM, NEW BRIGHTON, PATTERSON HEIGHTS AND ROCHESTER BOROUGHS, BEAVER COUNTY

BEAVER VALLEY WATER COMPANY

Place	Population 1910 census	Increase since 1900	Estimated 1915 population
Beaver Falls,	12,191	2,137	13,316x
Bridgewater,	1,562	215	1,600b
College Hill,	1,787	897	2,000b
East Rochester,	718	(Incorp.1908)	800b
Eastvale,	322	63	350b
Freedom,	3,060	1,277	3,500b
Fallston,	555	6	575b
New Brighton,	8,329	1,509	9,124x
Patterson Heights,	367	95	400b
Rochester,	5,903	1,215	6,500b
Total,	34,794	----------	38,165bx

LOCATION

Central Beaver County, on both sides of Beaver River, 5.5 miles from mouth and along north bank of Ohio River, 3.5 miles upstream from mouth of Beaver River, on Pennsylvania Lines West of Pittsburgh, Pittsburgh & Lake Erie R. R. and Beaver Valley Traction Ry. Built-up portion on bench flat land 0.25 to 0.5 mile wide, about 25 feet above river and bounded on other side by rapidly rising land.

INDUSTRIES

In Beaver Falls, steel works, machine tool, axe, shovel and saw works, pottery, tile, glass and brick works, sash and door factory, asbestos protected metal works and planing mills.

In College Hill, scale works, bridge works, enamel ware works, cork works and tube works. Seat of Geneva College.

In Conway and Freedom, shops and freight yards of Pennsylvania Lines, oil works and casket works.

In North Rochester, two glass works, nail works and an emery wheel works.

In East Rochester, glass works.

In Fallston, wire mill, keg works, flour mill and Beaver Electric Company.

In New Brighton, Sanitary fittings works, brass and bronze works, machine company, sewer pipe works, and pottery and porcelain works.

In Rochester, cut glass works, planing mill and brewery.

WATER SUPPLY

Beaver Valley Water Co., incorporated 1901 as Conway Water Co. for Economy Township, and name changed 1902. Stockholders held stock in following companies and have leased them to Beaver Valley Water Co. for 999 years:

Name	Inc.	Incorporated for
Beaver Valley Water Power Co.,	1902	Beaver County
College Hill Borough Water Co.,	1901	College Hill Borough
Fallston Water Co.,	1902	Fallston Borough
New Brighton Water Co.,	1838	(Special Act)
North Rochester Water Co.,	1901	Rochester Township
Patterson Heights Water Co.,	1902	Patterson Heights Borough
Union Water Co.,	1890	Beaver Falls Borough
Valley Water Co. of Rochester,	1902	Rochester Borough
Westside Water Co.,	1902	W. Bridgewater Borough

The original Beaver Valley Water Co. incorporated 1899 for Beaver County, but was not active after change of name of Conway Water Co. to Beaver Valley Water Co. in 1902, and was dissolved in 1912.

BEAVER VALLEY WATER COMPANY

SOURCE AND COLLECTION

(1) Beaver River; Eastvale pumping station in southern part of Eastvale borough, on east bank of river 5.25 miles above mouth; dam owned by Beaver Valley Water Power Co. Water led into forebay to drive turbines at pumping station; water from forebay also flows into pump well, from which it is pumped by a 6,000,000 gallon centrifugal pump, with two of same capacity in reserve, and operated by a 48-inch turbine, 12-inch line to 600,000 gallon settling basin. Then flows through mechanical filter, having ten 500,000 gallon units, to 260,000 gallon clear water well, with 24-inch suction line to pumps. Water pumped direct to system through 12-inch and 16-inch supply lines. Pumping equipment a 4,000,000 gallon Epping-Carpenter triplex pump, three 2,000,000 gallon Wilson & Snyder pumps, driven by two 48-inch and one 54-inch turbines generating 330 hp. under 14 feet head, a 3,000,000 gallon Wilson & Snyder steam pump, and three 150 hp. boilers in auxiliary steam plant. Water medium hard.

(2) Beaver River; New Brighton pumping station in central part of New Brighton, on east bank of river, 2.8 miles above mouth; dam owned jointly by New Brighton Water Co. and Fallston Water Co. (a power company), which has divided water flowing through race on either side of river into 100 shares on each side and Beaver Valley

Water Co. owns 37 shares out of the 100 in east raceway. Water flows into well at pumping station, thence pumped by 4,000,000 gallon centrifugal pump, with one of same capacity in reserve, and driven by a 19-inch, 40 hp. turbine having 10-inch discharge, into 275,000 gallon and 580,000 gallon settling basins. Then flows through filter plant, having five 600,000 gallon and two 750,000 gallon units, to a 375,00 gallon clear water well, and pumped through 14-inch force main into 16-inch line from Eastvale pumping station. Pumping equipment 1,500,000 gallon pump, operated by one 48-inch turbine generating 200 hp. under 16 feet maximum head, and an emergency 3,000,000 gallon Wilson & Snyder steam pump. Head was increased from 14 to 16 inch in 1913, after flood which damaged installation.

(3) Close by the above station is another, not in use, but held for emergency. It contains a 2,500,000 Wilson-Snyder pump driven by 54-inch turbine under 12 foot head and a 1,500,000 centrifugal pump driven by 19-inch, 40 hp. turbine.

(4) Emergency pumping station on Ohio River, at Freedom, installed by Freedom Water Company. Not operated since 1908, but kept in good condition for use in extreme emergencies requiring unfiltered water. Equipment a 12-inch intake to a filter crib, a 6-inch intake direct to river, two 350,000 gallon Deming triplex pumps, one 500,000 gallon Gould triplex and one 1,000,000 gallon Wilson & Snyder pumps.

DISTRIBUTION

From (1) by pumping direct to 12-inch and 16-inch supply lines of distribution system. Under normal conditions water from New Brighton intake furnished on both sides of Beaver River and along east bank of Ohio south of New Brighton, and from Eastvale intake furnished on both sides of river north of New Brighton.

A 16-inch line and a 12-inch line across river to Beaver Falls, the 12-inch continuing north to College Hill, where it branches into two 12-inch mains supplying low service, and connecting to a 4,000,000 gallon equalizing reservoir in central part of borough. A 60,000 gallon wooden tank on tower 80 feet above reservoir fed by an 8-inch main from booster station at reservoir and supplies a high service in College Hill through 12-inch line. Pumping equipment 1,000,000 gallon Wilson & Snyder duplex pump driven by gas engine. The 12-inch and 16-inch mains supply Beaver Falls and have a 10-inch connection to 1,000,000 gallon reservoir in northwestern part of Beaver Falls, known as Mt. Washington.

From Beaver Falls a 6-inch main extends to Patterson Heights, where a pumping station in northeastern part of borough forces water through 6-inch line to high service, with 6-inch connection to 125,000 gallon wooden tank west of borough, to be replaced by concrete reservoir. Pumping equipment a 250,000 gallon Deming pump.

A 16-inch main from Eastvale pumping station south to New Brighton supplies northern part of that borough with connection to 500,000 gallon equalizing reservoir, a 12-inch emergency line extending across river at southern part of Beaver Falls, and joins the 14-inch line from New Brighton pumping station.

From (2) by pumping direct to 14-inch supply main, connection to 16-inch trunk main from Eastvale pumping station. This 16-inch main supplies southern part of New Brighton; 6-inch and 8-inch lines across river to Fallston, an 8-inch line across river to Bridgewater, 8-inch line to North Rochester. The 16-inch from New Brighton reduces to 12-inch after supplying Rochester, where it connects to 60,000 gallon wooden equalizing tank on steel tower. Twelve-inch line supplies East Rochester and continues along Ohio River to Freedom, where 8-inch connection is made to 2,000,000 gallon and 500,000 gallon equalizing reservoir east of southern part of borough.

Place	Average pressure (pounds)	Fire hydrants—mostly 6-inch	
		Municipal	Private
Beaver Falls,	45 (90 lbs. fire)	133	24
Bridgewater,	125	16	0
College Hill,	45	0	14
East Rochester,	60	7	30
Fallston,	100	10	4
Freedom,	125	40	1
New Brighton,	45 to 130	91	13
Patterson Heights,	50 to 155	9	0
Rochester,	40 to 135	90	0
Total,		396	86

Trunk line delivery mains as follows:

Size (inches),	16	14	12	10	8	6	Total
Length (miles),	5.46	0.82	7.82	2.08	3.01	2.81	22.00
Gate valves,	9	3	16	11	18	5	62

Distributing mains (in miles) as follows:

Place	3-in.	4-in.	6-in.	8-in.	10-in.	Total length
Beaver Falls,	1.6	7.1	14.2	3.3		26.2
Bridgewater,	0.2	1.6	0.6	0.2		2.6
College Hill,	0.1	1.9	0.9	0.5		3.4
Fallston,	0.1	0.1		1.0		1.2
Freedom,	0.3	2.2	1.9	0.3		4.7
New Brighton,	4.5	5.6	5.2	1.1	0.1	16.5
Patterson Hts.,	0.3	0.7	0.6			1.6
	3 in. and smaller					
Rochester,	0.5	5.6	4.0	0.2		10.3
North Rochester,	0.1	1.3	0.3	0.4		2.1
Totals,	7.7	26.1	27.7	7.0	0.1	68.6

CONSUMPTION

Supply to 34,775 people; 6,202 taps; 2,327 metered including 263 industrial and about one-third of domestic. Average daily consumption 5,800,000 gallons, 80% domestic and 20% industrial; maximum 27,080,000 gallons; measured by pump displacement. Metered consumption 975,000 gallons daily industrial and 188,000 gallons daily domestic.

INDUSTRIAL

Following industries have private supplies:

Name	Location	Source	Average daily consumption
American Axe & Tool Co.,	Beaver Falls,	Pumped from Beaver River,	
Ames Shovel Co.,	Beaver Falls,	Pumped from Beaver River,	
Standard Connecting Rod Co.,	Beaver Falls,	Pumped from Beaver River,	
Mayer Pottery Co.,	Beaver Falls,	Pumped Beaver River water from mill race	
Valley Ice Co.,	Beaver Falls,	Pumped from drilled well,	
Penn Bridge Co.,	College Hill,	Pumped from drilled well,	22,000 gals.
Pittsburgh Seamless Tube Co.,	College Hill,	Pumped from river,	500,000 gals.
Pittsburgh Machine Co.,	College Hill,	Water Company,	
H. C. Fry Glass Co.,	Rochester,	Pumped from Lacock's Run,	

BUTLER BOROUGH, NORTH BUTLER AND LYNDORA VILLAGES, BUTLER COUNTY

THE BUTLER WATER COMPANY
(American Water Works & Electric Co.)

TWO MUTUAL COMPANIES AND THREE PRIVATE SYSTEMS

	Population 1910 census	Increase since 1900	Estimated 1915
Butler,	20,728	9,875	22,000
Lyndora,			3,000
North Butler,			250

LOCATION

County seat, central Butler County, along Connoquenessing Creek; on Pennsylvania R. R., Buffalo, Rochester & Pittsburgh R. R., Baltimore & Ohio R. R., Bessemer & Lake Erie R. R., Pittsburgh & Butler Street Ry., Pittsburgh, Harmony, Butler & New Castle Ry. and But-

ler Passenger Ry. Lyndora adjacent to and west of southwestern corner of borough.

INDUSTRIES

Steel car plant, boiler engine, machine and tool works, foundries, gas engine works, tank works, tin, copper and sheet iron works, glass and brick works, and numerous smaller plants.

WATER SUPPLY

The Butler Water Co., incorporated 1877 for Butler Borough, owned and operated by American Water Works and Electric Co. of New York. Two mutual companies in which every consumer is supposed to be a stockholder. Springdale Mutual Water Association formed 1891 and has franchise to operate in First ward. Citizens Mutual Water Co. formed in 1909 has franchise for Third and Fourth wards, between Mercer Street on west and Main Street on east.

Private system of J. W. McKee, in Fourth ward.

Private system of W. B. McGeary installed in 1894 franchise for Third ward. Purchased in 1911 East Oakland Mutual Water Association formed in 1908 with franchise to operate in Fourth ward.

Private system of S. B. Cross, installed in 1905, franchise for part of Fifth ward.

BUTLER WATER COMPANY

SOURCE AND COLLECTION

(1) Connoquenessing Creek: Boydtown reservoir, capacity 94,000,000 gallons, 7 miles northeast of borough, on Connoquenessing Creek; watershed area, 13.7 square miles. Two miles below is 521,000,000 gallon storage reservoir, receiving overflow from reservoir above and drainage from 3.1 square miles. This reservoir under construction.

(2) Thorn Run, tributary to Connoquenessing Creek, 2 miles northeast of borough; 206,000,000 gallon storage reservoir, 2 miles above mouth and 4 miles northeast of borough; watershed area 6.9 square miles.

A 24-inch gravity main from Boydtown reservoir receives 24-inch main from lower reservoir, and at mouth of Thorn Run a 16-inch main from Thorn Run reservoir, where it reduces to 20-inch for 0.75 mile and then changes to 24-inch 1,800 feet to filter plant.

Water flows through 300,000 gallon settling basin, and mechanical filter having ten 500,000 gallon units, to 235,000 gallon clear water basin; then pumped through 12-inch and 10-inch force mains, 2,600

feet westward into 2,300,000 gallon distributing reservoir on hill in northeast corner of borough. Pumping equipment:

Number and type	Rated capacity (gallons)	Pipe connection	
		Suction	Discharge
One Worthington,	2,500,000	12-inch	12-inch
One Worthington,	1,250,000	12-inch	10-inch
One Worthington,	4,000,000	18-inch	16-inch
One R. D. Wood,	3,000,000	18-inch	16-inch

Boilers, 405 hp.

Water soft in winter and medium hard in summer.

DISTRIBUTION

By gravity through 16-inch and 10-inch main. Twelve-inch line leads to Lyndora and 2-inch to North Butler.

Pressures 40 to 125 pounds; 56 miles distributing mains, 1-inch to 16-inch and 217 fire hydrants, $5\frac{3}{4}$-inch.

CONSUMPTION

Supply to 20,000 people, 150 in North Butler and 3,000 in Lyndora; 3,550 domestic and 50 industrial taps, all metered. Average daily consumption, 2,600,000 gallons; 40% domestic and 60% industrial; measured by meters.

SPRINGDALE MUTUAL WATER ASSOCIATION

SOURCE AND COLLECTION

Three springs, used about 8 months of year, and six drilled wells, used as auxiliary supply, just southeast of southeastern corner of borough. Large spring piped through 4-inch line, the two others through 2-inch lines, to 45,000 gallon receiving basin; water raised by air-lift to receiving basin. A 130,000 gallon triplex pump, with 3-inch suction in receiving basin, discharges through 3-inch force main into 224,000 gallon and 84,000 gallon reservoirs on top of hill, southeast of pumping station. Pumps operated by a 15 hp. and 25 hp. gas engine.

DISTRIBUTION

By gravity through 6-inch main with 6, 4 and 3-inch laterals; pressure 120 pounds.

CONSUMPTION

Supply to 1,625 people; 325 taps. No means of measuring consumption; assuming 40 gallons per capita, would be 65,000.

CITIZENS MUTUAL WATER COMPANY

SOURCE AND COLLECTION

Three drilled wells, 441, 356 and 175 feet deep, and one spring in northern part of Fifth ward. Water from two wells pumped, and spring flows into 42,000 gallon receiving basin, whence water pumped to 100,000 gallon tank near third well which, with two others is held in reserve. Pumping equipment deep well pumps connected to 7 hp. gas engines at each well. Water soft.

DISTRIBUTION

By gravity through 6-inch pipe; pressures 65 to 80 pounds; 4 miles 6-inch and 4-inch distributing mains and 2 miles 2-inch; no fire hydrants.

CONSUMPTION

Supply to 800 people; 213 taps, all metered. Average daily consumption 7,500 gallons, all domestic.

PRIVATE SYSTEM OF J. W. McKEE

SOURCE AND COLLECTION

Drilled well 253 feet deep, in Fourth ward. Water pumped by gas engine pump, capacity 1,000 gallons daily, through 1½-inch pipe to 2,400 gallon tank.

DISTRIBUTION

By gravity through 1-inch pipe.

CONSUMPTION

Supply to 30 people; 6 taps. Average daily consumption 400 gallons, all domestic.

PRIVATE SYSTEM OF W. B. McGEARY

SOURCE AND COLLECTION

(1) Three drilled wells, one 135 and two 85 feet deep, on hillside in western part of borough. An 18,000 gallon deep well pump over each well, with 2-inch suction and 1½-inch discharge to two 20,000 gallon tanks. This system operates in Third ward and is not connected to (2).

(2) Two drilled wells, 431 and 225 feet deep, on hillside in northeastern corner of borough. Water pumped by 36,000 gallon and 240,000 gallon deep well oil pumps, with 2-inch discharge into 20,000 gallon tank nearby. This system operates in Fourth ward.

DISTRIBUTION

From (1) by gravity through 2-inch pipe from each tank, joining to form 2-inch line with 2-inch, 1½-inch and 1-inch laterals, a total of about one mile of mains; pressure from 5 to 75 pounds.

From (2) by gravity through 3-inch pipe with 2-inch and 1-inch laterals; pressure 60 pounds.

CONSUMPTION

Supply to 1,200 people in Third ward, 130 metered taps; 300 people in Fourth ward, 60 taps. Average daily consumption 20,000 gallons, all domestic.

PRIVATE SYSTEM OF S. B. CROSS

SOURCE AND COLLECTION

Two drilled wells, 185 feet deep, on hillside in western part of borough, and at higher elevation than wells of W. B. McGeary. A 15,000 gallon deep well oil pump, operated by gas engine, 2-inch discharge to 4,350 gallon tank. Water soft.

DISTRIBUTION

By gravity through 2-inch pipe; pressure 20 to 30 pounds; about 4,000 feet distributing mains.

CONSUMPTION

Supply to 650 people; 130 taps. Average daily consumption 6,500 gallons, all domestic; measured by meter.

BUTLER COUNTY HOME, BUTLER COUNTY

PRIVATE SUPPLY

Estimated population, 115.

LOCATION

Central Butler County, just south of Butler Borough.

WATER SUPPLY

Private system using drilled well 400 feet deep, on grounds of Home. Water pumped through 4¼-inch force main to 60,000 gallon elevated tank nearby, and delivered by gravity through 4-inch pipe; supply to 115 people.

CANONSBURG BOROUGH, WASHINGTON COUNTY

NORTH STRABANE WATER COMPANY

Population 1910 census, 5,588; increase since 1900, 2,264. Estimated 1915, 7,000. Includes S. Canonsburg, annexed 1911

LOCATION

Central northern Washington County, on opposite sides of Chartiers Creek; on Pittsburgh, Cincinnati, Chicago & St. Louis Ry. and Pittsburgh Rys.

INDUSTRIES

In oil and coal district; Standard Steel and Iron Co., Canonsburg Pottery Co., Fort Pitt bridge works, Canonsburg Milling Co., Pennsylvania State Training school at Morganza, 1 mile below Canonsburg.

WATER SUPPLY

North Strabane Water Co., incorporated 1901 for North Strabane Township. Holding company; controls through stock ownership the following:

Company	Inc.	Incorporated for
Peoples Water Co. of Canonsburg,	1901	Canonsburg Boro.
South Canonsburg Water Co.,	1901	South Canonsburg Boro.
Cecil Water Co.,	1901	Cecil Twp.
Chartiers Twp. Water Co.,	1901	Chartiers Twp.

Pennsylvania Training School at Morganza has private system.

SOURCE AND COLLECTION

Little Chartiers Creek, tributary of Chartiers Creek, 3 miles east of borough; intake dam and pumping station below two tributaries, Cascade and Speers runs, 2.5 miles east of borough; 57,000,000 gallon storage reservoir 1,200 feet above pumping station, on Speers Run; watershed area 3 square miles; capacity of intake 20,000,000 gallons. Water pumped by 2,000,000 gallon Worthington pump to 100,000 gallon settling basin, thence flows through mechanical filter, capacity 1,250,000 gallons, to 125,000 gallon clear water well. Treated by hypochlorite in 20-inch pipe from filters to clear water well. Water pumped through 12-inch force main 8,300 feet west to 6,000,000 gallon distributing reservoir, on hill 380 feet above pumps. Pumping equipment 2,000,000 gallon Worthington pump and two 150 hp. boilers. Water medium hard.

DISTRIBUTION

By gravity through 10-inch main 1 mile long; pressures 60 to 175 pounds; 18 miles distributing mains, 4-inch to 8-inch; 62 fire hydrants, 4-inch.

CONSUMPTION

Supply to 4,000 people; 1,200 taps, 85% metered, 15% industrial. Average daily consumption 800,000 gallons, 65% domestic and 35% industrial; measured by pump displacement. Some of the taps are in Cecil, Chartiers and North Strabane townships.

PENNSYLVANIA TRAINING SCHOOL SYSTEM

SOURCE AND COLLECTION

(1) Spring on grounds, west side of Chartiers Creek.

(2) Morganza Creek, tributary of Chartiers Creek from northwest, about 0.5 mile northeast of institution; 20,000,000 gallon impounding reservoir and two wells 1 mile north of buildings. Water pumped into two distributing reservoirs, combined capacity 360,000 gallons, on hill west of pumping station. Filter plant two slow sand units, capacity 300,000 gallons daily, and 150,000 gallon clear water basin now under construction. Another pump to be installed.

DISTRIBUTION

From (1) by carrying, for drinking purposes.

From (2) by gravity through 6-inch pipe, for general domestic purposes except drinking.

CONSUMPTION

Supply to 500 inmates and 100 employees. Average daily consumption 160,000 gallons.

CARNEGIE AND TERRITORY SOUTH OF PITTSBURGH, ALLEGHENY COUNTY

SOUTH PITTSBURGH WATER COMPANY

Source of supply in Monongahela Sub-basin, Section No. 19 (q. v.).

CLAYSVILLE BOROUGH, WASHINGTON COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,045; increase since 1900, 189. Estimated 1915, 1,100

LOCATION

Southwestern Washington County, on headwaters of Dutch Fork Buffalo Creek; on Baltimore & Ohio R. R.

INDUSTRIES

Agriculture; marble works and Plant No. 2 of Penn Bridge Co.

WATER SUPPLY

Municipal works built in 1894; used for fire protection only, till 1906.

SOURCE AND COLLECTION

Spring in shallow ravine just outside of northwest limits of borough. Water pumped by 76,000 gallon Deane pump from small collecting basin through 4-inch force main about 1,000 feet to 100,000 gallon iron distributing tank, on hill at northern borough line.

DISTRIBUTION

By gravity through 4-inch pipe; maximum pressure 150 pounds; 1.6 miles distributing mains, 4-inch to 8-inch; 30 fire hydrants, 2½-inch.

CONSUMPTION

Supply to 300 people; 93 taps, all metered. Average daily consumption 3,300 gallons, all domestic.

COST AND REVENUE

Total cost of works, $16,000; annual operating expenses, $1,076.

COLONA VILLAGE (MOON TWP.), BEAVER COUNTY

ALLAIRE WATER COMPANY

Estimated 1915 population, 500a

LOCATION

Southeastern Beaver County, along west bank of Ohio River; on Pittsburgh & Lake Erie R.R. Range of elevations in built-up portion 180 feet.

INDUSTRIES

Colonial Steel Co.

WATER SUPPLY

Allaire Water Co., incorporated 1901 for Moon Township, by Colonial Steel Co.

SOURCE AND COLLECTION

Ohio River, filter crib with 14-inch line to pumping station well at lower steel plant. Water pumped by Worthington duplex pump through 6-inch force main 2,316 feet to 25,000 gallon tank on hill in village. Water soft.

DISTRIBUTION

By gravity through 6-inch main; pressures 60 to 150 pounds; 1.5 miles distributing mains, 2-inch to 6-inch; 9 fire hydrants, 2½-inch.

CONSUMPTION

Supply to 500 people; 90 taps. Average daily consumption, 416,000 gallons, all domestic; measured by pump displacement. Pumps operate continuously; large amount of waste at tank overflow.

INDUSTRIAL

Steel company has large Epping-Carpenter and Smith-Vaile pumps forcing water through 12-inch main direct to plant, with connection to 115,000 gallon equalizing standpipe.

Industrial consumption 1,184,000 gallons daily, 25% used for steam and balance for hydraulic and general cooling purposes.

CONWAY BOROUGH, BEAVER COUNTY

MUNICIPAL WATER SYSTEM

Population 1910 census, 1,483 (incorporated 1902). Estimated 1915 population, 1,600b

LOCATION

Southeastern Beaver County, along east bank Ohio River; on Pennsylvania Lines West of Pittsburgh, Beaver Valley Traction Ry., terminus of North Shore R. R.

INDUSTRIES

Shops and freight yards of Pennsylvania Lines.

WATER SUPPLY

Municipal system installed 1909.

SOURCE AND COLLECTION

Eight 8-inch drilled wells along east bank of Ohio River, in upper part of borough, opposite foot of Thirteenth Street. Water pumped through 10-inch force main direct to system. Pumping equipment a 350,000 gallon triplex pump driven by electric motor.

DISTRIBUTION

By pumping direct to system, with connection to 60,000 gallon equalizing tank, on hill in borough, 270 feet above pumping station; 2.5 miles distributing mains, 4-inch to 10-inch.

CONSUMPTION

No data.

CORAOPOLIS BOROUGH, ALLEGHENY COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 5,252; increase since 1900, 2,697. Estimated 1915, 6,000

LOCATION

Northwestern Allegheny County, along south bank of Ohio River, 10 miles below Pittsburgh; on Pittsburgh & Lake Erie R. R.

INDUSTRIES

Residential suburb of Pittsburgh. Duquesne Steel Foundry Co., Standard Steel Spring Co., Consolidated Lamp and Glass Co. and three oil companies.

WATER SUPPLY

Municipal works built in 1896.

SOURCE AND COLLECTION

Ten drilled wells on river bank, in borough, below end of Neville Island, connected by 6-inch pipes to 12-inch suction main to pumping station. Water pumped through 10-inch force main direct to distributing system. Pumping equipment one 1,500,000 gallon Gould gas engine-driven pump and one 1,000,000 gallon Hall steam pump. Water hard.

DISTRIBUTION

By pumping direct to system, with 8-inch connection to 600,000 gallon and 330,000 gallon equalizing tanks, on highest hill, immediately south of borough; pressures 70 to 105 pounds; 10 miles distributing mains; 84 fire hydrants, 3-inch.

CONSUMPTION

Supply to 5,500 people; 1,200 taps, 175 metered. Stated average daily consumption 1,500,000 gallons, 50,000 gallons industrial. No means of measurement.

COST AND REVENUE

Gross revenue, $18,300; operating expenses, $6,040.

EAST BUTLER (SUMMIT TWP.), BUTLER COUNTY

EAST BUTLER WATER COMPANY

Estimated 1915 population, 600a

LOCATION

Central Butler County, on Nueman Branch of Connoquenessing Creek and 2 miles east of Butler Borough; on Baltimore & Ohio R. R. and Buffalo, Rochester & Pittsburgh R. R.

INDUSTRIES

Large oil refinery and an iron and brass bed factory.

WATER SUPPLY

East Butler Water Co., incorporated 1908 for Summit Township, Butler County.

SOURCE AND COLLECTION

Three drilled wells, 130 to 200 feet deep, on hill directly northeast of village. Water raised by three pumps driven by 5 hp. gas engine to receiving tank nearby and thence pumped by Gould triplex pump driven by 10 hp. gas engine through 2-inch pipe to 150,000 gallon reservoir about 120 feet above village. Water medium hard.

DISTRIBUTION

By gravity through 6-inch pipe; pressures 50 to 100 pounds; 1.6 miles distributing mains mostly 2-inch; no fire hydrants.

CONSUMPTION

Supply to 500 people; 97 taps, 12 meters. Average daily consumption, 20,000 gallons, all domestic; measured by pump displacement.

INDUSTRIAL SUPPLY

Valvoline Oil Refinery Co. pumps water from eight drilled wells and Bonnie Brook. Iron and brass bed works pumps water from tributary of Bonnie Brook and eight drilled wells.

ELLWOOD CITY BOROUGH AND BURNSTOWN VILLAGE (WAYNE TWP.), LAWRENCE COUNTY

ELLWOOD WATER COMPANY
(The Pittsburgh Company)

	Population 1910 census	Increase since 1900	Estimated 1915
Ellwood City,	3,902	1,659	7,000a
Burnstown,			1,200a

LOCATION

Southern Lawrence County, adjacent to Beaver County line and on south bank of Connoquenessing Creek, 2 miles above junction with Beaver River; on Pittsburgh & Lake Erie R. R., Baltimore & Ohio R. R.; and Pittsburgh, Harmony, Butler & New Castle Railway. Built-up portion on sandstone table-land along creek, ground to south rising rapidly; range of elevation 116 feet.

INDUSTRIES

Shelby tube works (2), steel car forge works, Standard Engineering Co., Ellwood foundry, Ellwood City Forge Co., Mathews Gravity Carrier Co., Cavert Wire Co., Ellwood City Nail Co., American Steel Co., Burrows Foundry Co., Ellwood City Iron & Wire Co., Clydesdale Stone Co., (2), Crichton Enamel Co., Pennsylvania Power Co., Garlock Packing Co.

WATER SUPPLY

Ellwood Water Co., incorporated 1892 for Wayne Township; subsidiary of The Pittsburgh Co.

SOURCE AND COLLECTION

Slippery Rock Creek, tributary of Connoquenessing Creek, 1 mile east of borough. Intake, pumping station and filter plant near mouth; watershed area 437 square miles. Water medium hard.

Two 20-inch intake pipes 150 feet long to pump well. Centrifugal pump lifts water to 380,000 gallon settling basin, thence through 20-inch pipe to mechanical filters having four 750,000 gallon units, thence to 145,000 gallon clear water basin. Water pumped directly to distributing system. Pumping equipment two 10-inch 4,320,000 gal-

lon centrifugal pumps, one 3,000,000 gallon Prescott duplex pump, one 1,000,000 gallon Epping-Carpenter pump (auxiliary), and two Erie 150 hp. return tubular boilers.

DISTRIBUTION

By pumping direct to system, with connection to 6,000,000 gallon equalizing reservoir south of and at elevation 190 feet above borough; pressures 30 to 90 pounds. Distributing mains:

Size (inches),	16	12	10	8	6	4	3	2 and smaller	Total
Length (miles),	1.69	0.40	2.08	0.68	1.51	8.09	0.08	1.43	15.96

Sixty-five fire hydrants, 2½-inch.

CONSUMPTION

Supply to 6,500 people; 1,168 domestic and 26 industrial taps, 73% metered. Average daily consumption 2,238,000 gallons; 22% domestic; 73% industrial and 5% for washing filters; measured by pump displacement. Supplies following industries:

Shelby Steel Tube Co., 760,790 gallons; Ellwood City Forge Co., 3,470 gallons; Clydesdale Stone Co., 4,230 gallons; Mathews Gravity Carrier Co., 2,740 gallons; Garlock Packing Co., 470 gallons; Pittsburgh and Lake Erie R. R., 7,840 gallons; Baltimore and Ohio R. R., 6,260 gallons; Steel Car Forge Co., 163,610 gallons; American Steel Co., 325 gallons; Standard Engineering Co., 18,300 gallons; Ellwood Foundry Co., 365 gallons; Pennsylvania Power Co., 550 gallons; Cavert Wire Co., 900 gallons; Burrows Foundry Co., 100 gallons; Crichton Enamel Co., 350 gallons.

EVANSBURG BOROUGH, BUTLER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,339; increase since 1900, 136. Estimated 1915, 1,350b

LOCATION

Southwestern Butler County, along Breakneck Creek, tributary of Connoquenessing Creek: on Baltimore & Ohio R. R. and Pittsburgh, Harmony, Butler & New Castle Ry.

INDUSTRIES

In agricultural, oil producing and bituminous coal mining district; foundry, boiler works, carriage works, planing mill, flour and grist mill.

WATER SUPPLY

Municipal works purchased 1898 from Evans City Water Co., incorporated 1891 for Evans City borough, now Evansburg.

SOURCE AND COLLECTION

Five drilled wells, 160 to 120 feet deep, 1 mile northwest of center of borough and 0.25 mile west of creek. Water pumped through 6-inch line into 1,250,000 gallon reservoir, on hilltop, in northern part of borough. Pump driven by 25 hp. gas engine. Water hard.

DISTRIBUTION

By gravity through 6-inch main 1.5 miles long; pressure 125 pounds; 2 miles distributing mains; 20 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,200 people; 325 taps, all metered. Average daily consumption 25,000 gallons, 5,000 industrial.

GREENVILLE BOROUGH, MERCER COUNTY

GREENVILLE WATER COMPANY

Population 1910 census, 5,909; increase since 1900, 1,095. Estimated 1915, 7,500

LOCATION

Northwestern Mercer County, at junction of Little Shenango with Shenango River; on Pennsylvania Lines West of Pittsburgh; Erie R. R. and Bessemer & Lake Erie R. R. Eastern part of borough on flat land; western part, residential, along hillside.

INDUSTRIES

Chicago Bridge & Iron Co., Carnegie Steel Co.'s rolling mills; steel car works and artificial stone works. Seat of Thiel College.

WATER SUPPLY

Greenville Water Co., incorporated 1885 for Greenville Borough.

SOURCE AND COLLECTION

Small tributary of Little Shenango River from south 2 miles north of borough; 13,000,000 gallon storage reservoir 2 miles east of borough, with discharge into creek; 500 feet below is 2,000,000 gallon intake reservoir; watershed area 2.2 square miles. Water flows through mechanical filter, three 500,000 gallon units, to 4,000,000 gallon clear water reservoir directly below intake reservoir. Water medium hard.

Auxiliary pumping station used in dry seasons, on south bank of Little Shenango River, in northern part of borough. Water pumped through 10-inch force main to settling basin of filter plant 2 miles east. Pumping equipment a 750,000 gallon Blake and a 1,500,000 gallon Gardiner.

DISTRIBUTION

By gravity through 14-inch main parallel to 10-inch force main from clear water reservoir; pressure 25 to 75 pounds. Distribution mains:

Size (inches),	14	10	8	6	4	3 and smaller	Total
Length (miles),	0.05	0.8	1.9	3.4	7.2	2.8	16.1
Per cent.,		5	12	21	45	17	100

Fire hydrants 72.

CONSUMPTION

Supply to 7,500 people; 1,767 taps, 82 domestic and 10 industrial metered. Average daily consumption 700,000 gallons. No means of measuring. At certain times supplies Bessemer & Lake Erie R. R. 220,000 gallons daily.

GROVE CITY BOROUGH, MERCER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 3,674; increase since 1900, 2,075. Estimated 1915, 5,000a

LOCATION

Southeastern Mercer County, along Wolf Creek; on Bessemer & Lake Erie R. R. and Slippery Rock & Grove City Street Ry. Built-up portion on both sides of, and sloping gently to, creek; range of elevations 1,230 to 1,270.

INDUSTRIES

In bituminous coal mining district; gas engine, carriage, broom and novelty works, motor truck works, foundry, planing mill, brass foundry, flour mill and machine shops. Seat of Grove City College. United States Experimental Creamery to be constructed.

WATER SUPPLY

Municipal plant built in 1898. Grove City College has private system.

SOURCE AND COLLECTION

(1) Drilled well No. 4, on bank of creek, in south central part of borough. Pumping station No. 2, 100 feet north of well, contains 700,000 gallon Bessemer triplex pump, with 8-inch suction and 8-inch force main, driven by a 25 hp. electric motor. Water medium hard.

(2) Bessemer drilled well No. 2, 1,000 feet north of pumping station No. 1, near west bank of Wolf Creek, in north of borough; 6-inch line from well to pump well at pumping station. Water pumped through 8-inch force main direct to system. Pumping equipment a 240,000 gallon Smith-Vaile triplex pump, driven by 15 hp. electric motor, with 25 hp. gas engine for emergencies.

(3) Two or more drilled wells under construction in eastern part of borough; when finished present pumping equipment will be moved to new site. Water will be pumped through 12-inch force main 2,800 feet to new iron standpipe, 30 feet diameter and 70 feet high, opposite Odd Fellows' Home.

DISTRIBUTION

By pumping direct to system, with 8-inch connection to 44,000 gallon equalizing standpipe in western part of borough; pressures 35

to 55 pounds; about 9.7 miles distributing mains, 2-inch to 8-inch, 61% 4-inch; 110 fire hydrants, 6-inch.

CONSUMPTION

Supply to 4,500 people; 1,000 taps, 80% metered. Average daily consumption 360,000 gallons, less than 1% industrial; estimated from meters. Supplies following industries and institutions:

Bessemer motor truck works (no record); Grove City College (no record); B. & L. E. R. R. in emergencies, 5,000 gallons; Montgomery broom factory, 1,000 gallons.

COST AND REVENUE

Original cost of works about $30,000; total cost of works to January 1, 1914, $60,953; annual operating expenses, $3,106; gross revenue, $7,117.

INDUSTRIAL SUPPLY

Bessemer gas engine works and McKay carriage works have private supply by pumping from drilled wells.

GROVE CITY COLLEGE SYSTEM

Dug well, 4 feet diameter and 24 feet deep, on college grounds in central part of borough. A 5,000 gallon pump; with 2-inch suction, forces water through 1½-inch line direct to system. No record of consumption. Borough system supplies drinking water.

HAYSVILLE BOROUGH, ALLEGHENY COUNTY

HAYSVILLE WATER COMPANY

Population 1910 census, 166, incorporated 1902. Estimated 1915, 300

LOCATION

Northwestern Allegheny County, along north bank of Ohio River; on Pennsylvania Lines West of Pittsburgh. Built-up portion on hillside rising from narrow flat along river.

INDUSTRIES

Residential suburb of Pittsburgh; varnish works.

WATER SUPPLY

Haysville Water Co., incorporated 1898 for Osborne Borough and Aleppo Township. Greater part of Osborne Borough supplied by Sewickley Water Co.

SOURCE AND COLLECTION

(1) Haysville Run, tributary of Ohio River, and several springs; intake and reservoir 0.75 mile from mouth and north of borough; watershed area 1 square mile. Filter crib intake with two 2-inch valved pipes to 220,000 gallon reservoir 250 feet downstream, and 150 feet above low part of borough; 24,000 gallon basin 15 feet downstream from reservoir receives flow of springs through 4-inch pipe 10 feet long.

(2) Ohio River; filter crib about 2,000 feet upstream from mouth of Haysville Run, 4 feet under river bed and 150 feet from bank; 3-inch suction pipe 220 feet to pumping station. Water pumped by a 60,000 gallon Deming triplex pump, belt-connected to gas engine, through pressure filters having combined capacity 48,000 gallons daily into 3-inch force main to distributing system near pumping station.

DISTRIBUTION

From (1) by gravity through 4-inch main. Spring basin used for ordinary supply and reservoir held for emergencies.

From (2) by pumping direct to system.

CONSUMPTION

Supply to 300 people; 81 taps, all metered; 26 in Osborne borough. Average daily consumption 6,800 gallons, all domestic.

JAMESTOWN BOROUGH, MERCER COUNTY

JAMESTOWN WATER COMPANY

Population 1910 census 822; decrease since 1900, 12. Estimated 1915, 900.

LOCATION

Northwestern corner of Mercer County, along east side of Shenango River; on Lake Shore & Michigan Southern Ry. and Pennsylvania Lines West of Pittsburgh.

INDUSTRIES

Paint and varnish works, flour mill and creamery.

WATER SUPPLY

Jamestown Water Co., incorporated 1914; works completed January, 1915.

SOURCE AND COLLECTION

Drilled wells, 700 feet north of borough line, in South Shenango Township, Crawford County. Four 6-inch wells, average 100 feet deep, and one 8-inch well, 220 feet deep; capacity 398,000 gallons daily. Water pumped by air-lift through 5-inch discharge 225 feet to 600,000 gallon reinforced concrete storage and distributing reservoir, about 140 feet above business section. Pumping equipment Bessemer air compressor direct-connected to 40 hp. Bessemer gas engine.

DISTRIBUTION

By gravity from distributing reservoir through 8-inch main, about 1,325 feet long; pressures 55 to 60 pounds; 3.3 miles 6-inch and 4-inch distributing mains, 16% 4-inch; 27 fire hydrants.

CONSUMPTION

Supply to 48 taps, with prospects of immediate increase. Reported average daily consumption 100,000 gallons, 60% domestic and 40% industrial.

KOPPEL BOROUGH, BEAVER COUNTY

KOPPEL WATER COMPANY
(Oreinstein-Arthur Koppel Co.)

Estimated population, 500a. Incorporated 1913.

LOCATION

Central northern Beaver County, along west bank of Beaver River; on Pennsylvania R. R. and Pittsburgh & Lake Erie R. R.

INDUSTRIES

Works of Oreinstein-Arthur Koppel Co., a German company manufacturing industrial railway equipment.

WATER SUPPLY

Koppel Water Co., incorporated 1910 for Koppel Village now a borough; owned by Oreinstein-Arthur Koppel Co.

SOURCE AND COLLECTION

Seymour Hollow, a small tributary of Stockman's Run, 1.5 miles west of borough; 2,000,000 gallon reservoir at mouth; watershed area 0.44 square mile.

DISTRIBUTION

By gravity through 10-inch main 6,750 feet long; pressure about 70 pounds; 2.1 miles distributing mains, 3-inch and 4-inch; 2 fire hydrants, 4-inch.

CONSUMPTION

Supply to 500 people; 100 taps; 1 meter. Stated average daily consumption, 30,000 gallons; 60% domestic and 40% industrial. No means of measurement.

LEETSDALE AND EDGEWORTH BOROUGHS AND FAIR OAKS VILLAGE (LEET TWP.), ALLEGHENY COUNTY

EDGEWORTH WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Leetsdale,	1,904	(Inc. 1904)	2,000b
Edgeworth,	1,229	(Inc. 1904)	1,670b
Fair Oaks,	500		830b
Total,	3,633		4,500b

LOCATION

Northwestern Allegheny County, along north bank of Ohio River; on Pennsylvania Lines West of Pittsburgh; Leetsdale terminus of Beaver Valley Traction Co. Built-up portion on level land between river and steep hills, and extending up hillside; range of elevations 720 to 915.

INDUSTRIES

Residential suburb of Pittsburgh. At Leetsdale, Riter & Conley Company.

WATER SUPPLY

Edgeworth Water Co., incorporated 1883 for Leet Township. Small portion of Edgeworth supplied by Sewickley Water Co., described in this section under Sewickly Borough.

SOURCE AND COLLECTION

(1) Four drilled wells, two 10-inch diameter and 25 feet deep, and two 12-inch diameter and 30 feet deep under construction, connected to 12-inch suction by 6-inch pipes along river bank, in eastern part of Edgeworth, at foot of Chestnut Street. Water pumped direct to distributing system through 6-inch and 10-inch force mains, each 450 feet long. Pumping equipment 1,340,000 gallon Platt triplex pump direct-connected to 125 hp. Westinghouse gas engine, a 500,000 gallon Deming triplex direct-connected to a 60 hp. Westinghouse gas engine, and a 300,000 gallon Deming triplex pump direct-connected to Westinghouse gas engine.

(2) Spring north of Leetsdale, with delivery pipes connected with distributing system.

DISTRIBUTION

By pumping direct to system with 10-inch and 6-inch connection to two equalizing reservoirs, combined capacity 650,000 gallons, on top of hill, 1 mile north of Edgeworth, at elevation 915; pressures 8 to 117 pounds. Distributing mains as follows:

Size (inches),	12	10	6	4	2	Total
Length (miles),	1.36	0.76	5.16	3.49	1.27	12.04
Per cent.,	11	6	43	29	11	100

Sixty-four fire hydrants, 6-inch.

CONSUMPTION

Supply to 3,358 people; 668 domestic and 9 industrial taps, all metered. Average daily consumption 170,000 gallons; 52% domestic, 45% industrial and 3% public and commercial.

INDUSTRIAL SUPPLY

Riter & Conley, of Leetsdale, has private system.

LINESVILLE BOROUGH, CRAWFORD COUNTY

BUNDAY'S WATER COMPANY
(Bunday Lumber Co.)

Population 1910 census, 833; increase since 1900, 172. Estimated 1915, 1,000.

LOCATION

Central western Crawford County, on tributary near headwaters of Shenango River; on Pennsylvania Lines West of Pittsburgh, Bessemer & Lake Erie R. R., terminus of Northwestern Pennsylvania Railway.

INDUSTRIES

Lumber yards, planing mills, feed mill, grist mill, cheese factory.

WATER SUPPLY

Bunday's Water Co., incorporated 1898 for Linesville Borough and Pine Township by Bunday Lumber Co.

SOURCE AND COLLECTION

(1) Springs rising on hillside in north central part of borough, collected by 8-inch terra cotta pipe into 75,000 gallon reservoir in centre of borough. Water pumped through 4-inch main direct to system. Pumping equipment a Deming triplex pump driven by 25 hp. steam engine, or at times by 5 hp. electric motor.

(2) Springs 0.33 mile east of northeastern corner of borough piped through 2-inch and 6-inch pipe to 60,000 gallon reservoir.

(3) Springs 0.25 mile north of borough; tile drains south to connect with delivery main from collecting reservoir of (2).

DISTRIBUTION

From (1) by pumping direct to system in central and western part of borough, with 4-inch connection to 75,000 gallon equalizing reservoir in northwestern part of borough; pressure 40 pounds.

From (2) by gravity through 6-inch main, reducing to 4-inch, for supply of eastern half of borough. Connected by 4-inch line near centre of borough to pumping system, but valve kept closed except in emergencies; pressure 35 pounds.

(3) Used principally for fire protection and supply by 4-inch line to 26,400 gallon tank of Pennsylvania R. R. at station; pressures

20 to 40 pounds; about 2 miles distributing mains, 2-inch and smaller; 19 fire hydrants, 4-inch and 3-inch.

CONSUMPTION

Supply 800 people; 260 taps, 6 in Pine Township, east, and 1 south of borough limits. Stated average daily consumption 60,000 gallons, 1,200 industrial.

MARS BOROUGH, BUTLER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,215; increase since 1900, 438. Estimated 1915, 1,500a.

LOCATION

Southwestern Butler County, near headwaters of Breakneck Creek, a tributary of Connoquenessing Creek; on Baltimore & Ohio R. R., Pittsburgh & Western R. R., and Pittsburgh & Butler Street Ry. Built-up portion on bluff, 40 to 50 feet higher than creek and rising rapidly to over 100 feet.

INDUSTRIES

In natural gas and oil district; tool and machine shop, boiler and tank works.

WATER SUPPLY

Municipal works installed in 1905.

SOURCE AND COLLECTION

(1) Two drilled wells, one 6-inch diameter and 90 feet deep, other 8-inch diameter and 194 feet deep, on bank of creek, in eastern part of borough; combined yield in dry seasons reported as 36,000 gallons daily. Water pumped through 6-inch line into 64,000 gallon reservoir, on hill just outside borough line, and about 200 feet higher than pumps. Pumping equipment a 130,000 gallon Downie deep well pump, belt-connected to 20 hp. gas engine over each well. Water medium hard.

(2) Kinkade Spring 100 feet west, and Kennedy Spring, 525 feet north, of pumping station. Kinkade Spring has 4-inch pipe to well No. 2; Kennedy Spring in reserve.

DISTRIBUTION

By gravity through 6-inch main; pressure 54 to 96 pounds; 4 miles distributing mains, 4-inch and 6-inch; 29 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,000 people; 210 taps, 93% metered. Average daily consumption 40,000 gallons, 80% domestic; 20% industrial to tool and machine shop and boiler and tank works.

COST AND REVENUE

Total cost of works about, $14,000; annual operating expenses, $1,200; gross revenue, $1,800.

McDONALD BOROUGH AND ADJOINING TOWNSHIPS, WASHINGTON COUNTY

CITIZENS WATER COMPANY OF McDONALD

Population 1910 census, 2,543; increase since 1900, 68. Estimated 1915 population, 2,576a.

LOCATION

Northern Washington County, on Allegheny County line and Robinson Run; on Pennsylvania Lines West of Pittsburgh, and Oakdale and McDonald Street Ry. Built-up portion on hillsides on either side of Robbs Run, tributary of Robinson Run, business section being in valley near mouth; range of elevations 1,000 to 1,096.

INDUSTRIES

Agriculture; in coal, gas and oil district.

WATER SUPPLY

Citizens Water Co. of McDonald, incorporated 1893 for McDonald Borough. Parent company for six others supplying in townships adjacent to source and pipe line, as follows:

Name	Inc.	Incorporated for
Citizens Water Co. of Cecil Twp.,	1911	Cecil Twp.
Citizens Water Co. of Mt. Pleasant Twp.,	1911	Mt. Pleasant Twp.
Citizens Water Co. of N. Fayette Twp.,	1911	North Fayette Twp.
Citizens Water Co. of Robinson Twp.,	1911	Robinson Twp.
Citizens Water Co. of Smith Twp. (not yet operating).		Smith Twp.
Citizens Water Co. of S. Fayette Twp.,	1911	S. Fayette Twp.

SOURCE AND COLLECTION

(1) St. Patricks Run, tributary of Little Raccoon Creek, northwest of borough; 90,000,000 gallon storage reservoir in Robinson Township, 7 miles northwest of borough; watershed area 3.5 square miles. Pumping station 150 feet from, and 30 feet below, reservoir. Water pumped through 10-inch force main 6 miles to 600,000 gallon standpipe 232 feet above pumps and 1,200 feet from north borough line. Pumping equipment, a 1,000,000 gallon Snow duplex pump and 100 and 125 hp. boilers. Water soft.

(2) Auxiliary supply from Raccoon Creek; intake and pumping station in Robinson Township, 1.25 miles northwest of storage reservoir; watershed area 80 square miles. Water pumped in dry seasons through 10-inch force main 7.2 miles to connection with force main of main pumping station. Pumping equipment a 1,000,000 gallon Snow duplex pump, and 100 hp. Sterling boiler.

Two 10-inch drilled wells, 100 feet deep, near pumping station, as auxiliaries; reported capacity 4,440,000 gallons daily. A Downie deep well pump over each well raises water to 105,000 gallon iron tank with discharge line connecting with suction line to main pumps.

DISTRIBUTION

By gravity through 10-inch main southwest to borough, and by pumping through branch to Robinson Township Water Co.; pressures 60 to 100 pounds. Distributing mains in McDonald as follows:

Size (inches),	10	8	6	4	3	2	Total
Length (miles),	0.7	0.4	0.1	4.2	0.1	0.6	6.1

Forty-four fire hydrants, $5\frac{3}{4}$-inch.

The subsidiary companies have following mains and take water as follows:

	Distributing mains (miles)						Take water from—
Size (inches),	2	3	4	6	10	Total	
Citizens Water Co. of—							
Cecil Twp.,	0.15	0.13	0.38	0.02	--------	0.68	4-inch line to S. Fayette Twp. and 6-inch from boro.
Mt. Pleasant Twp.,	--------	--------	0.49	--------	--------	0.49	Single line from borough
N. Fayette Twp.,	0.28	--------	0.04	--------	--------	0.32	Three points on borough boundary line
Robinson Twp.,	--------	--------	0.38	--------	*8.0	0.38	10-inch force main
S. Fayette Twp.,	--------	--------	2.01	--------	--------	2.01	
Total,	0.43	0.13	3.30	0.02	--------	3.88	

*Force mains.

CONSUMPTION

Supply to 6,000 people; 565 taps, 99% metered. Average daily consumption 501,000 gallons, 50% domestic and 50% industrial; measured by pump displacement and meters.

Industrial supply to Pennsylvania Lines at two points, one in Cecil Township and other in Mt. Pleasant Township, and to seven coal mines, as follows:

Name	Owner	Location
Brier Hill,	Pittsburgh Coal Co.,	McDonald Boro.
Shaw,	Pittsburgh Coal Co.,	Robinson Twp.
Jumbo,	Pittsburgh Coal Co.,	Cecil Twp.
Creedmore,	Pittsburgh Coal Co.,	Cecil Twp.
Bishop,	Pittsburgh Coal Co.,	Cecil Twp.
Rising,	Pittsburgh Coal Co.,	Cecil Twp.
Primrose,	Carnegie Coal Co.,	Mt. Pleasant Twp.

McKEES ROCKS, AVALON, BELLEVUE, BEN AVON, EMSWORTH, AND WESTVIEW BOROUGHS AND EAST BELLEVUE VILLAGE (ROSS TWP.), ALLEGHENY COUNTY

OHIO VALLEY WATER COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Avalon,	4,317	2,187	4,500a
Bellevue,	6,323	2,907	8,500a
Ben Avon,	1,828	969	2,200a
Emsworth,	1,510	552	1,800a
McKees Rocks,	14,702	8,350	17,000a
West View,	1,626	(Inc. 1905)	1,800a
East Bellevue,			1,500a
Total,	30,306		37,300a

LOCATION

Northwestern Allegheny County, on both sides of Ohio River, between Pittsburgh and Emsworth, including eastern part of Neville Island; on Pennsylvania Lines West of Pittsburgh, Pittsburgh & Lake Erie R. R. and Pittsburgh Rys. District on north side of river on high bluffs, 100 feet above and extending along river 4 miles, and averaging 1 mile wide. District on south side on rapidly rising land from low land along river, rising to ridge at elevation 400.

INDUSTRIES

Suburban residential district of Pittsburgh; steel mills in McKees Rocks and on Neville Island; shops and yards of Pittsburgh & Lake Erie R. R.

WATER SUPPLY

Ohio Valley Water Co., incorporated 1903 for McKees Rocks Borough as West Park Water Co., and name changed 1904. Purchased in 1904 property and franchises of following:

Name	Inc.	Incorporated for
Arizona Water Co.,	1904	Emsworth Boro.
Colorado Water Co.,	1904	Ben Avon Boro.
Idaho Water Co.,	1904	Bellevue Boro.
Perrysville Water Co.,	1903	Ross Twp.
Vermont Water Co.,	1904	Avalon Boro.
Benwood Water Co.,	1903	Stowe Twp.
Valley Consolidated Water Co.,	1896	District northeast of Ohio River between Allegheny City & Beaver County

The Benwood Water Co. purchased in 1904 property and franchises of Fleming Park Water Co., incorporated 1901 for Fleming Park and Stowe Township.

The Valley Consolidated Water Co. in 1897 purchased property and franchises of following:

Company	Inc.	Incorporated for
Bellevue Water Co.,	1892	Bellevue Boro.
Riverview Water Co.,	1894	Avalon Boro.

Works built in 1898 by Valley Consolidated Water Co.

A small section of McKees Rocks, until recently, supplied by Monongahela Water Co. is now supplied by Ohio Valley Water Co., the latter having purchased all the property of the former in this district.

SOURCE AND COLLECTION

System of 44 drilled wells, at head of Neville Island, in Ohio River, opposite Bellevue; wells 18 to 34 feet deep, 6- to 12-inches in diameter and include a well 20 feet in diameter under pump station on river bank; total capacity of wells, 7,000,000 gallons daily. Water lifted by low service pumps into two pits 22 feet diameter, with bottom at low water level, and delivered to a 120,000 gallon receiving well at pumping station. In one pit a 3,000,000 gallon and an 800,000 gallon Worthington pump, drawing water through two 16-inch

suction lines from 30 wells in river just north of east end of island; in other pit a 3,000,000 gallon Deane pump and a 1,500,000 gallon Worthington pump, drawing water from large well under pump station, and a 16-inch suction line from 14 drilled wells 800 feet from pump station in back channel between island and south bank of river.

Water pumped from receiving well at pumping station direct to system through two 12-inch force mains each 1,470 feet long, under north river channel, and three 12-inch force mains under south river channel. Pumping equipment two Worthington, 2,000,000 and 3,000,000 gallon pumps, one Nordberg 5,000,000 pump and three Heine 300 hp. water-tube boilers.

DISTRIBUTION

By pumping direct to two districts, one north and other south of river.

(1) Twelve-inch force mains under river enter northern district in Avalon near Bellevue line, where they join 16-inch main to 1,700,000 gallon distributing reservoir on ridge, at elevation 480 feet above pumping station, in northern part of Bellevue. Main branch a 12-inch extending through Bellevue and Avalon to Ben Avon, reducing to 10-inch through Ben Avon to Emsworth.

For supply to Westview Borough auxiliary pumping station at Bellevue reservoir raises water through 10-inch force main 2 miles through Ross Township to 150,000 gallon standpipe 16 feet in diameter and 100 feet high, at Westview. Pumping equipment 500,000 gallon Deming triplex pump direct-connected to 27 hp. Otto gas engine, and one Deming triplex pump connected to a 24 hp. Nash gas engine.

(2) Twelve-inch force mains under river enter southern district in Stowe Township and connect with 20-inch main which extends up a ravine 0.5 mile west of McKees Rocks to 6,000,000 gallon distributing reservoir on high table-land, 0.75 mile from river. The 20-inch force main directly connected to distributing system by a 20-inch trunk line leading east and reducing to 16-inch.

Pressures 40 to 200 pounds. Distributing mains on north side 56.5 miles; on south side 26.7 miles; 273 fire hydrants, 4¾-inch.

CONSUMPTION

Supply to 40,000 people; 8,000 taps, 56% metered. Average daily consumption 4,296,000 gallons; 90% domestic and 10% industrial; measured by pump displacement.

MERCER BOROUGH, MERCER COUNTY

MERCER WATER COMPANY

Population 1910 census, 2,026; increase since 1900, 222. Estimated 1915, 2,200a.

LOCATION

County seat, south central Mercer County, at junction of Otter Creek with Neshannock Creek; on Pennsylvania Lines West of Pittsburgh, and Bessemer & Lake Erie R. R. Built-up portion 275 feet above valley on summit of hill.

INDUSTRIES

In agricultural, oil and gas producing and bituminous coal mining district; stove works, silk mill and flour mill.

WATER SUPPLY

Mercer Water Co., incorporated 1887 for Mercer Borough.

SOURCE AND COLLECTION

Otter Creek; intake and pumping station on eastern edge of borough. Two intake wells 20 feet diameter and 20 feet deep, in gravel, on bank of creek. Large well used in summer and small one in winter. Water pumped by 576,000 gallon pump through 6-inch force main to 50,000 gallon standpipe in central part of borough. Water soft.

DISTRIBUTION

By gravity through 6-inch main; pressures 35 to 160 pounds; 8 miles distributing mains, mostly 4-inch; 38 fire hydrants.

CONSUMPTION

Supply to 2,000 people; 400 taps, 6 meters. Stated average daily consumption 250,000 gallons, all domestic. No means of measurement.

MIDLAND BOROUGH, BEAVER COUNTY

MIDLAND WATER COMPANY

Population 1910 census, 1,244 (Inc. 1906). Estimated 1915 population, 5,000a.

LOCATION

West central Beaver County, along north bank of Ohio River; on Pennsylvania Lines West of Pittsburgh, and Ohio River Passenger Ry. Built-up portion on hillside 0.5 mile from river; elevations from 775 to 1,280.

INDUSTRIES

Midland Plant of Pittsburgh Crucible Steel Co., Pittsburgh Iron & Steel Foundries Co., and Treadwell Construction Co.

WATER SUPPLY

Midland Water Co., incorporated 1907 for Midland Borough. Owned by Pittsburgh Crucible Steel Co. Water sold to Midland Water Co. from Steel Co.'s pumping station.

SOURCE AND COLLECTION

A 48-inch force main from Ohio River pumping station to pumping station at plant; water taken from main, just before it reaches sump, by means of 18-inch Tee reduced to 12-inch line. Two 8-inch 1,800,000 gallon Jeanesville centrifugal pumps take water from this line to 800,000 gallon mechanical gravity filter plant, two units, with two 150,000 gallon reaction tanks; water flows thence to 38,000 gallon clear water well. Water pumped direct to system by two 2,500,000 gallon Wilson-Snyder duplex pumps.

Water medium hard.

DISTRIBUTION

By pumping through 12-inch main 3,230 feet direct to system, with connection to 150,000 gallon equalizing standpipe; pressures 60 to 90 pounds; 6.7 miles distributing mains, 4-inch and 6-inch; 30 fire hydrants, 6-inch.

CONSUMPTION

Supply to 4,000 people; 535 taps, 29 meters. Average daily consumption 370,000 gallons, all domestic; maximum 501,000 gallons; measured at reaction tanks.

PITTSBURGH CRUCIBLE STEEL COMPANY

SOURCE AND COLLECTION

Ohio River; two intake chambers with screens. Water pumped through 48-inch force main; emergency 24-inch main. Pumping equipment two centrifugal and two triplex pumps, with combined capacity of 34,000,000 gallons daily. The 48-inch main leads to power house for condensing water, and a 24-inch branch to pumping station reservoir, capacity 500,000 gallons, at plant, which receives also cooling water discharge from blast furnace. Midland Water Co. taps this line just before it reaches reservoir. Part of water then pumped to 190,000 gallon raw water standpipe, under head of 100 feet, and used for cooling and general purposes. Remainder of water flows through 150,000 gallon water softening plant, consisting of reaction tank and mechanical filter, to 86,000 gallon clear water well and pumped to 125,000 gallon standpipe under head of 60 feet. This water used for boiler purposes.

CONSUMPTION

Average daily industrial consumption 18,065,000 gallons; 50,000 supplied to Pennsylvania R. R. locomotive standpipe, 10,000 to Treadwell Construction Co., and 6,000 to Pittsburgh iron and steel foundries. Also supplies 370,000 gallons daily to Midland Water Co.

MONACA BOROUGH, BEAVER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 3,376; increase since 1900, 1,368. Estimated 1915, 3,600a.

LOCATION

Central Beaver County, on south side of Ohio River, opposite mouth of Beaver River; on Pittsburgh & Lake Erie R. R. Built-up portion on level terrace of gravel formation 60 feet above normal river level.

INDUSTRIES

Glass works, tile works, specialty works, enameled and porcelain bath-room fittings works, tool, steel and iron works, tube works, steel plant and several smaller industries.

WATER SUPPLY

Municipal works installed in 1895.

SOURCE AND COLLECTION

Ohio River; pumping station on south bank, in northern part of borough, with 16-inch intake pipe 260 feet to filter crib in river. Water pumped through 14-inch force main 5,180 feet to 500,000 gallon reservoir, on hillside south of borough. Pumping equipment one 2,000,000 gallon Wilson-Snyder pump and an emergency 1,000,000 gallon Wilson-Snyder pump.

DISTRIBUTION

By gravity through 8-inch main; pressure 110 to 135 pounds; 7.5 miles distributing mains, 2-inch to 8-inch; 61 fire hydrants, 4-inch.

CONSUMPTION

Supply to 3,000 people; 659 taps, 155 metered. Average daily consumption 212,000 gallons, 53,000 gallons industrial; measured by pump displacement. About two-thirds of domestic consumers use cisterns for soft water supply.

COST AND REVENUE

Total cost of works, $100,000; annual operating expenses, $4,500; gross revenue, $6,400.

MONACA HEIGHTS (MOON TWP.), BEAVER COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 100.

LOCATION

Central Beaver County, south of Monaca Borough, along south bank of Ohio River opposite mouth of Beaver River. Built-up portion on hilltop. Residential suburb of Monaca.

WATER SUPPLY

Private system of McKay Bros., installed 1905.

SOURCE AND COLLECTION

Drilled well, 160 feet deep, on hill. Water pumped by 7,200 gallon pump to 1,600 gallon elevated tank nearby.

DISTRIBUTION

By gravity through 1¼-inch pipe; pressure 18 pounds.

CONSUMPTION

Supply to 70 people; 13 taps. No means of measuring consumption; but assuming 30 gallons per capita would be 2,000 gallons daily, all domestic.

NEW CASTLE CITY, LAWRENCE COUNTY

CITY OF NEW CASTLE WATER COMPANY
(American Water Works & Electric Co., Inc.)

Population 1910 census, 36,280; increase since 1900, 7,941. Estimated 1915, 40,351 (U. S. Census).

LOCATION

County seat, central Lawrence County, at junction of Neshannock Creek with Shenango River, and junction of Shenango and Mahoning rivers to form Beaver River; on Pennsylvania Lines West of Pittsburgh, Erie R. R., Pittsburgh & Lake Erie R. R., Western Allegheny R. R., New Castle & Butler R. R., Mahoning-Shenango Ry. and Light Co., Pittsburgh, Harmony, Butler & New Castle Ry. Built-up portion along flat land of river valleys, rising to hills 200 to 300 feet above valleys.

INDUSTRIES

Steel and iron manufacturing, cement plants, engine works, boiler and tank works, bolt, nut and rivet works, brass foundry, foundries, enamel ware works, car works, chemical works, stove and range works, chair, box and crate manufacturing companies, pottery works, brick works, glass works, extract works, asphalt block works, two breweries, eight planing mills and three flour mills.

WATER SUPPLY

City of New Castle Water Co., incorporated 1902 as a merger of following companies:

Name	Inc.	Incorporated for
City of New Castle Water Co.,	1881	New Castle City
Mahoningtown Water Co.,	1896	Mahoningtown
Shenango Water Co.,	1897	Mahoningtown
West New Castle Water Co.,	1896	West New Castle

Owned by American Water Works & Electric Co., Inc., of New York.

SOURCE AND COLLECTION

Shenango River; intake and pumping station 0.25 mile north of city limits. Two Root rotary pumps capacity 5,000,000 and 6,000,000 gallons daily, with 20-inch suction in the river, discharge through 20-inch line to 1,000,000 gallon sedimentation basin, on hillside, east of pumping station. Water flows through 24-inch line, and mechanical filter plant of sixteen 500,000 gallon units, into 204,000 gallon and 208,000 gallon clear water basins; pumped to high service and through 20-inch force main to low service distributing reservoir, capacity 6,335,000 gallons on hill-top, 0.5 mile northeast of pumping station. A 6,000,000 gallon Epping-Carpenter duplex pump in filter house can be used for double filtration purposes. Pumping equipment for distributing system consists of:

Number and type	Rated capacity	Supplied
One Laidlaw-Dunn-Gordon pump,	1,000,000 gals. daily,	High service
One Prescott pump,	1,500,000 gals. daily,	High service
One Worthington pump,	4,500,000 gals. daily,	Low service
One Worthington pump,	3,000,000 gals. daily,	Low service
One Nordberg pump,	4,000,000 gals. daily,	Low service
One Babcock & Wilcox boiler,	200 hp.	
One Babcock & Wilcox boiler,	350 hp.	
One Geary boiler,	150 hp.	

DISTRIBUTION

By two separate services, a high service west of Shenango River, opposite and north of mouth of river, and in eastern part of city; low service, which includes nearly entire city.

Low service supplied by gravity through 16-inch and 12-inch mains from distributing reservoir; 10-inch line to southern part of city, known as Mahonington; pressures 25 to 110 pounds.

High service supplied by pumping; 12-inch force main extending into eastern part of city with 8-inch connection to 220,000 gallon equalizing tank on hill in that section; pressures 40 to 177 pounds.

Distributing mains as follows:

Size (inches),	16	12	10	8	6	4	3	2	smaller	Total
Length (miles),	3.57	8.64	0.74	8.57	32.50	11.62	0.04	9.24	2.63	77.05
Per cent.,	5	10	1	11	42	15	1	12	3	100

Three hundred and forty-four fire hydrants, 6-inch.

CONSUMPTION

Supply to 38,700 people; 7,753 taps, 78% metered, 74 taps industrial. Average daily consumption 3,600,000 gallons, 76% domestic and 24% industrial; measured by pump displacement. Metered consumption 840,000 gallons industrial and 755,000 gallons domestic.

The low service district uses 3,000,000 gallons out of the total 3,600,000 gallons daily. Average daily consumption by industries as follows: Pennsylvania R. R. 38,109 gallons; Baltimore & Ohio R. R., 446,469; Pittsburgh & Lake Erie R. R., 23,411; Wallace Heirs, 7,711; Pennsylvania engine works, 4,860; New Castle Portland Cement Co., 10,693; George V. Bayless, 4,247; J. N. Evers Sons, 11,479; American Tin Plate Co., 6,172; Strumahler Bros., 5,690; New Castle Stamping Works, 6,053; Standard brewery, 18,724; total, 583,018 gallons.

INDUSTRIAL

Following industries have private systems: New Castle Portland Cement Co., pump from dam on Big Run; Lehigh Cement Co., pump from drilled wells; Cold Storage plant, pump from Shenango River; Carnegie Steel Co., Rosena Furnace, pump from Shenango River; Standard Steel Car Works, pump from Shenango River; Pottery Co., pump from Shenango River; Dillworth Co. Paper Mill, pump from Neshannock Creek.

NEW SHEFFIELD (HOPEWELL TWP.), BEAVER COUNTY

HOPEWELL TOWNSHIP WATER COMPANY

Estimated 1915 population, 150.

LOCATION

Southern central Beaver County, near Logtown Run, a tributary of Ohio River.

WATER SUPPLY

Hopewell township Water Co., incorporated for Hopewell Township in 1907.

SOURCE AND COLLECTION

Two 10-inch drilled wells, 2 feet deep, about 1.5 miles west of Woodlawn and 0.5 mile northeast of New Sheffield, along Logtown Run. Water pumped by triplex pumps to 10,000 gallon reservoir, on hill, 0.25 mile north.

DISTRIBUTION

By gravity through 3-inch pipe; pressure at pump 125 pounds; about 2.3 miles of 2-inch and 3-inch mains; no fire hydrants.

CONSUMPTION

Supply to about 80 people; 18 taps. Average daily consumption 3,000 gallons, all domestic; measured by pump displacement.

NEW WILMINGTON BOROUGH, LAWRENCE COUNTY

NEW WILMINGTON WATER SUPPLY COMPANY

Population 1910 census, 758; increase since 1900, 33. Estimated 1915, 750.

LOCATION

Northern Lawrence County, on county line and Little Neshannock Creek; on Sharpsville R. R., a Baltimore & Ohio connection. Range in elevation of built-up portion 140 feet.

INDUSTRIES

Agriculture. Seat of Westminster College.

WATER SUPPLY

New Wilmington Water Supply Co., incorporated 1892 for New Wilmington Borough.

SOURCE AND COLLECTION

Two springs 1 mile south of centre of borough, and six drilled wells near reservoir. Springs flow through 3-inch tile pipe to 300,-

000 gallon outside and 30,000 gallon inner reservoir. Wells 90, 100, 140, 258 and 350 feet deep, are used as auxiliary supply about 9 months in year. Pumped by Myers deep well pumps having 2-inch and 3-inch lines to reservoir. Water hard.

DISTRIBUTION

By gravity through 8-inch main; pressure 35 to 80 pounds; 2.5 miles distributing mains, 1-inch to 8-inch; 24 fire hydrants, 4-inch.

CONSUMPTION

Supply to 600 people; 185 taps, 95 metered; 4 industrial. No means of measuring consumption; assuming 30 gallons per capita, would be 18,000 daily.

PULASKI VILLAGE (PULASKI TWP.), LAWRENCE COUNTY

PULASKI WATER COMPANY

Estimated 1915 population, 325.

LOCATION

Northwestern corner of Lawrence County, on east bank of Shenango River; on Pennsylvania Lines West of Pittsburgh, and Erie R. R.

INDUSTRIES

In agricultural district; two lumber works, grist mill and flour mill.

WATER SUPPLY

Pulaski Water Co., incorporated 1905 for Pulaski Village from private system installed 1895.

SOURCE AND COLLECTION

Springs on hillside 0.5 mile west of village, above west bank of river; 2½-inch line 250 feet to 42,000 gallon reservoir. Water medium hard.

DISTRIBUTION

By gravity through 2-inch pipe with 1½-inch laterals; pressure 60 to 80 pounds.

CONSUMPTION

Supply to 75 people; 19 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 2,300 gallons, all domestic.

SEWICKLEY AND OSBORNE BOROUGHS, ALLEGHENY COUNTY

SEWICKLEY MUNICIPAL WATER WORKS

	Population 1910 census	Increase since 1900	Estimated 1915
Sewickley,	4,479	911	4,880a
Osborne,	425	63	530a

LOCATION

Northwestern Allegheny County, along north bank of Ohio River; on Pennsylvania Lines West of Pittsburgh. Built-up portion on flat land with precipitous river bank 40 feet above low water. Range of elevation 300 feet. Residential suburb of Pittsburgh.

WATER SUPPLY

Sewickley municipal plant, installed 1873. The upper portion of Osborne is supplied by Haysville Water Co.

SOURCE AND COLLECTION

Ohio River; a large L-shaped filter crib a few hundred feet below United States Government dam No. 3, and 200 feet from north bank of river, near upper limits of Sewickley. Water through 18-inch suction, reduced to 12-inch and pumped through 10-inch force main 6,580 feet north to Reservoir No. 3 (capacity 2,000,000 gallons), upper of three reservoirs in ravine 1 mile northeast of Sewickley. Surplus from reservoir No. 3 flows to reservoir No. 2 (1,000,000 gallons), thence to reservoir No. 1 (5,000,000 gallons), which is the lower and distributing reservoir. Elevations above pumping station 197 to 144 feet. Pumping equipment a 2,000,000 gallon Smith-Vaile triplex pump connected to a 180 hp. gas engine, and a 1,000,000 gallon Hall steam pump with 80 hp. horizontal boiler.

STRIBUTION

(1) Low service supplied by gravity through 12-inch main from Reservoir No. 1; pressure 35 to 58 pounds.

(2) High service district, including parts of townships adjoining, supplied by pumping from station at Reservoir No. 3 through 6-inch force main to 1,000,000 gallon reservoir, on top of hill, just west of Reservoir No. 3, 65 feet above pumps and 160 feet above principal part of boroughs. Water also pumped to 258,000 gallon steel standpipe, 20 feet diameter and 110 feet high, with elevation of bottom 190 feet above pumps, on knob at head of stream above Reservoir No. 3. High service pumping equipment two Smith-Vaile triplex pumps, capacities 400,000 and 500,000 gallons, connected to 35 and 60 hp. gas engines. An 8-inch, reducing to 6-inch, gravity main from reservoir to high parts of boroughs. An 8-inch gravity main from standpipe 21,650 feet to Sewickley Heights and Aleppo Townships. Pressure 75 to 96 pounds.

High and low services connected for supply in emergencies. Distributing system as follows:

Size (inches),	3	4	6	8	10	12	16	Total
Length (miles),	0.2	11.3	5.8	2.6	1.9	0.5	0.05	22.3
Per cent.,	1	51	26	12	8	2	--------	100

One hundred and thirty fire hydrants, 5-inch, except one 3½-inch.

CONSUMPTION

Supply 5,410 people; 1,096 taps in Sewickley, 40 in Osborne, 30 in Edgeworth, 42 in Sewickley Heights Township and 5 in Aleppo Township. Average daily consumption 1,170,000 gallons, all domestic; measured by pump displacement; 100 meters. Metered consumption 142,300 gallons.

COST AND REVENUE

Total cost of works, $330,576; annual operating expense (1913), $12,622; gross revenue (1913) $29,022.

SHARON AND FARRELL BOROUGHS, MERCER COUNTY

SHARON WATER WORKS COMPANY

	Population 1910 census	Increase since 1900	Estimated 1915
Sharon,	15,270	6,354	18,077x
Farrell,	14,190	(Inc. 1901)	12,000a

LOCATION

Southwestern Mercer County, along Ohio State line and Shenango River; on Pennsylvania Lines West of Pittsburgh, Erie R. R., Valley Connecting Ry. and Mahoning & Shenango Ry. and Light Co. Business and manufacturing district on flat land along river; residential district on hills rising rapidly to 250 feet above low land.

INDUSTRIES

Steel and iron works, steel and wire plant, engine works, foundries, machine shops, sheet and tin plate plant, boiler works, malleable casting works, pattern works, hardware works, explosive manufacturing plant and a brewery.

WATER SUPPLY

Sharon Water Works Co., incorporated 1885 for Sharon Borough. Owns and supplies South Sharon Water Co., incorporated 1900 for South Sharon Village, now Farrell Borough.

SOURCE AND COLLECTION

Shenango River; intake, pumping station and filter plant on west bank just north of borough line. A 20-inch intake pipe from filter crib to pump well; watershed area about 500 square miles. Water pumped by centrifugal pump to 500,000 gallon sedimentation basin which feeds 45,000 gallon and 35,000 gallon settling tanks; flows through mechanical filter, having eight 500,000 gallon units, to 144,000 gallon clear water basin and pumped direct to system. Pumping equipment two 6,000,000 gallon centrifugal pumps, one 4,000,000 gallon Worthington pump and one 6,000,000 gallon Prescott pump.

DISTRIBUTION

By pumping direct to system through 10-inch and 12-inch mains, with connection to 2,100,000 gallon equalizing reservoir in State of

Ohio, about 1,400 feet west of State line, and Sharon, at elevation 333 feet above pumps; pressures 120 to 140 pounds. Distributing mains:

Size (inches),	12	10	8	6	4	2 and smaller	Total
Length (miles),	3.4	2.0	1.8	11.2	12.3	16.9	47.6
Per cent.,	7	4	4	24	26	35	100

Two hundred and forty fire hydrants, $4\frac{3}{4}$-inch.

CONSUMPTION

Supply to 30,000 people; 5,812 taps. Average daily consumption 2,665,000 gallons, 200,000 industrial; measured by pump displacement. Supplies about 200,000 gallons daily to National Malleable Casting Co., a small area in Hickory Township and in State of Ohio west of Sharon.

SHARPSVILLE BOROUGH, MERCER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 3,634; increase since 1900, 664. Estimated 1915, 3,800.

LOCATION

Central western Mercer County, 2 miles east of Ohio State line, on south bank of Shenango River; on Pennsylvania Lines West of Pittsburgh, Erie R. R., Sharpsville R. R. and Mahoning & Shenango Ry. and Light Co. Built-up portion flat land 1,000 feet wide along river, occupied by industries; business and residential section on rapidly rising land to table-land in southern part of borough.

INDUSTRIES

Shenango Furnace Co., Valley Mould Iron Co., and planing mill and boiler works.

WATER SUPPLY

Municipal plant installed 1898.

SOURCE AND COLLECTION

Large well 25 feet diameter and 18 feet deep, in gravel bank near Shenango River, in northermost part of borough; capacity 66,000 gallons. Water pumped through 10-inch line direct to system. Pumping equipment two 480,000 gallon Snyder-Hughes pumps.

DISTRIBUTION

By pumping direct to system, with 8-inch connection to 94,000 gallon equalizing standpipe, 1.25 miles southwest of pumping station; pressures 45 to 115 pounds; about 3 miles distributing mains; 90 fire hydrants, 4-inch.

CONSUMPTION

Supply 3,000 people; 600 taps, all metered. Average daily consumption 100,000 gallons, all domestic; measured by pump displacement.

COST AND REVENUE

Total cost of works, $32,500; annual operating expenses, $3,210; gross revenue, $4,725.

SLIPPERY ROCK BOROUGH, BUTLER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 670; decrease since 1900, 123. Estimated 1915, 850.

LOCATION

Northwestern Butler County, 2 miles north of Slippery Rock Creek; on Pennsylvania Lines West of Pittsburgh, and Slippery Rock & Grove City Street Ry.

INDUSTRIES

Agriculture; in limestone and bituminous coal district; planing mill. Seat of Slippery Rock Normal School.

WATER SUPPLY

Municipal water works built 1891 as private system and purchased by borough 1908.

Normal School, in southeastern part of borough, has private system, installed 1889.

MUNICIPAL WATER WORKS

SOURCE AND COLLECTION

Two drilled wells, 285 and 350 feet deep, on hilltop in eastern part of borough. Water pumped through 3-inch force main into 48,000 gallon elevated tank and 25,600 gallon tank just above pump. Pumping equipment two 12,800 gallon oil well pumps. Water medium hard.

DISTRIBUTION

By gravity through 2.6 miles mains; pressures 40 to 50 pounds. Thirty fire hydrants, 6-inch. Four-inch emergency connection to Normal School system.

CONSUMPTION

Supply to 800 persons; 185 taps. Average daily consumption 12,800 gallons, all domestic; entirely metered.

COST AND REVENUE

Total cost of works, $20,700; annual operating expenses, $1,180.

NORMAL SCHOOL SYSTEM

SOURCE AND COLLECTION

Two drilled wells, 180 and 250 feet deep, on grounds in southeastern part of borough. Water pumped through 3-inch line into 32,000 gallon tank. Pumping equipment two oil well pumps, combined capacity 32,000 gallons daily.

DISTRIBUTION

By gravity through 4-inch main; 4 inch emergency connection to municipal system.

CONSUMPTION

Supply to 700 people during school year. Average daily consumption 8,000 gallons.

SOUTH HEIGHTS BOROUGH, BEAVER COUNTY

CRESCENT BEACH WATER COMPANY

Estimated 1915 population, 300a

LOCATION

Southeastern Beaver County, along west bank of Ohio River; on Pittsburgh and Lake Erie R. R.

INDUSTRIES

Oil production.

WATER SUPPLY

Crescent Beach Water Co., incorporated 1899 for Shannopin Village, now South Heights Borough, from private system installed 1892.

SOURCE AND COLLECTION

(1) Three springs 0.25 mile west of village, used from December to about May 20th each year. Northern spring piped by 2-inch line into 11,000 gallon tank, other two through 2-inch line to 36,000 gallon reservoir near tank.

(2) Drilled well, 85 feet deep, on river bank, in village, used during summer months. Water pumped through 2-inch line connecting to gravity system. Pumping equipment a 10,800 gallon oil well pump, 12 hp. Reed gas engine and 6 hp. Bessemer gas engine; pressures 20 to 80 pounds; about 1 mile 2-inch distributing mains; 3 fire hydrants.

DISTRIBUTION

By gravity through 2-inch pipe from tank and reservoir during winter and by pumping direct to system in summer; pressure 80 pounds.

CONSUMPTION

Supply to 200 people; 58 taps. No means of measuring consumption, assuming 30 gallons per capita would be 6,000 gallons daily, all domestic.

STATE HOSPITAL FOR INSANE (KILBUCK TWP.), ALLEGHENY COUNTY

PRIVATE SUPPLY

Estimated 1915 population, 1,200a

LOCATION

Dixmont Village in northwestern Allegheny County, along north bank of Ohio River, opposite Neville Island; on Pennsylvania Lines West of Pittsburgh, and Pittsburgh Rys.

WATER SUPPLY

Private system installed 1862.

SOURCE AND COLLECTION

(1) Spring on hill north of main building.

(2) Ohio River; filter crib connected to pump well. Water pumped by two 1,000,000 gallon triplex steam pumps through 8-inch force main 1,700 feet to 7,000,000 gallon reservoir on hill north of buildings.

DISTRIBUTION

From (1) by gravity through 3-inch pipe for drinking purposes.

From (2) by gravity through 8-inch pipe, 1,200 feet long, for general purposes.

Pressures 70 to 135 pounds; 8 fire hydrants, 4-inch.

CONSUMPTION

Supply to 1,200 people. Average daily consumption 350,000 gallons, including 300 gallons to Pennsylvania Lines; measured by pump displacement.

STONEBORO BOROUGH, MERCER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,074; increase since 1900, 13. Estimated 1915, 1,200

LOCATION

Northeastern Mercer County, on western end of Sandy Lake; on Pennsylvania Lines West of Pittsburgh, and Lake Shore & Michigan Southern R. R.

INDUSTRIES

Coal mining region; large ice houses at lake.

WATER SUPPLY

Municipal plant installed 1903. (Borough is in Section 16 but principal source of supply is in Section 20.)

SOURCE AND COLLECTION

(1) Two springs 1.5 miles west of center of borough. A 350,000 gallon reservoir over one receives 3-inch pipe from two others nearby. Springs said to flow 120,000 gallons daily during ordinary season.

(2) Three springs 3.5 miles northwest of center of borough. Water piped to reservoir of source (1) through 7,500 feet of 4-inch main. Water medium hard.

DISTRIBUTION

By gravity through 6-inch main; pressures 30 to 68 pounds; 1.5 miles distributing mains; 14 fire hydrants

CONSUMPTION

Supply to 700 people; 171 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 21,000 gallons daily, domestic.

VOLANT BOROUGH, LAWRENCE COUNTY

PRIVATE SUPPLY

Population 1910 census, 185; increase since 1900, 65. Estimated 1915, 200b

LOCATION

Northern Lawrence County, near county line and along west bank of Neshannock Creek; on Pennsylvania Lines West of Pittsburgh.

INDUSTRIES

Agriculture, limestone quarries 3 miles southwest of Neshannock Falls.

WATER SUPPLY

Private system owned by consumers. Source of supply a small spring on hillside west of borough. Water delivered by gravity through 2-inch pipe to 20 taps. Stated average daily consumption 300 gallons. No means of measurement.

WAMPUM BOROUGH, LAWRENCE COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 980; increase since 1900, 164. Estimated 1915, 1,000

LOCATION

Central southern Lawrence County, along west bank of Beaver River; on Pennsylvania Lines West of Pittsburgh, and Lake Erie R. R. Built-up portion at base of high hills parallel to river.

INDUSTRIES

Agricultural district; Crescent Portland Cement Co., American Cement Tile Manufacturing Co., and limestone quarries.

WATER SUPPLY

Municipal works built 1911 for fire protection only.

SOURCE AND COLLECTION

Springs in northern part of borough; water collected in 24-inch terra cotta pipe, with loose joints, to 18,000 gallon receiving tank with 6-inch terra cotta line, cement joints, 500 feet to pump well at north end of Main Street. A 288,000 gallon Aldrich triplex, pump belt-connected to Richmond 20 hp. electric motor using current from Ellwood City, pumps water through 6 inch force main 500 feet direct to distributing system.

DISTRIBUTION

By pumping direct to system, with 6-inch connection to 200,000 gallon equalizing reservoir in western part of borough, 160 feet above pumps; pressures 76 to 80 pounds; 5,400 feet of 6-inch and 2,000 feet of 4-inch distributing mains; 13 fire hydrants.

WASHINGTON AND EAST WASHINGTON BOROUGHS, WASHINGTON COUNTY

CITIZENS WATER COMPANY OF WASHINGTON, PA.

	Population 1910 census	Increase since 1900	Estimated 1915
Washington,	18,778	5,712	20,000
East Washington,	1,300	249	1,400

LOCATION

County seat, central Washington County, along Chartiers Creek; on Pittsburgh, Cincinnati, Chicago & St. Louis Ry., Waynesburg & Washington R. R., Baltimore & Ohio R. R. and Pittsburgh Rys.

INDUSTRIES

In natural gas, oil and coal district; Tyler tube works, Gazle-Atlas glass Co., Clay pottery works, McClure & Griffith tin mills. Seat of Washington and Jefferson College.

WATER SUPPLY

Citizens Water Co. of Washington, Pa., incorporated 1886 for Washington Borough. Purchased in 1901 property and franchises of following:

Company	Inc.	Incorporated for
West Washington Water Co.,	1901	West Washington Boro.
South Washington Water Co.,	1901	South Washington Boro.
North Washington Water Co.,	1901	North Washington Boro.
East Washington Water Co.,	1901	East Washington Boro.
And leased the following:		
Jessop Water Co.,	1901	Canton Twp.
Kalorama Water Co.,	1901	North Franklin Twp.
South Strabane Water Co.,	1912	South Strabane Twp.

SOURCE AND COLLECTION

Two small tributaries of Chartiers Creek, 2 and 2.5 miles south of borough; watershed area 7 square miles. Reservoirs as follows:

Reservoir	Location	Capacity (gals.)
Number 1	1.5 miles southwest of borough,	11,000,000
Number 2	300 feet south of No. 1,	6,000,000
Number 3	3 miles south of borough,	106,000,000
Number 4	1 mile south of No. 3,	600,000,000

Water flows from No. 3 through 12-inch gravity main 1.12 miles to filter plant, joined by 16-inch from No. 4; through 450,000 gallon settling basin and mechanical filters of four units, capacity 3,000,000 gallons daily, to Reservoir No. 2, 100 feet west, used as filtered water basin. Fourteen-inch and 20-inch lines lead to pump well; water pumped through 20-inch force main to 3,000,000 gallon distributing reservoir on Cemetery Hill, 1 mile east of filter plant, elevation 350 feet above filters. Pumping equipment 3,000,000 gallon Worthington, and a 3,000,000 gallon Jeanesville pump, with 16-inch suctions. Water medium hard.

DISTRIBUTION

By gravity through a 12-inch and two 10-inch mains; pressure 40 to 140 pounds. There are 48.2 miles distributing mains as follows:

Size	Washington	E. Washington	Canton Twp.	So. Strabane Twp.	No. Franklin Twp.
2-inch,	2.7	0.6	0.5		0.7
4-inch,	16.3	2.9	0.9		
6-inch,	17.5	0.6	1.4	1.2	0.04
8-inch,	0.3				0.1
10-inch,	1.3				0.7
12-inch,					0.5
Total (miles),	38.1	4.1	2.8	1.2	2.0

Hydrants, borough, 170 in Washington, 15 in East Washington; private, 16 in Canton Twp., 1 in South Strabane Twp., 11 in Washington.

CONSUMPTION

Place	Population supplied	Number of taps		Meters	Average daily consumption	
		Domestic	Industrial		Total (gallons)	Industrial (gallons)
Washington,	9,000	2,828	33	2,863	831,900	532,400
East Washington,	1,300	248	0	248	42,000	None
Canton Twp.,	400	88	17	105	327,100	321,800
S. Strabane Twp.,	250	5	1	6	39,000	14,600
N. Franklin Twp.,	150	25	1	26	3,300	1,800
Total,	11,100	3,194	52	3,246	1,243,300	870,600

WEST MIDDLESEX BOROUGH, MERCER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,157; increase since 1900, 227. Estimated 1915, 1,200

LOCATION

Southwestern corner Mercer County, along Shenango River; on Pennsylvania Lines West of Pittsburgh; Erie R. R. and Mahoning & Shenango Ry. and Light Co.

INDUSTRIES

In agricultural district; bituminous coal mines east of borough; two large blast furnaces.

WATER SUPPLY

Municipal plant installed in 1903.

SOURCE AND COLLECTION

Two wells partly dug and partly drilled, flowing wells during ordinary seasons, 1 mile north of east of center of borough; water piped through 12-inch line 300 feet east to 288,000 gallon reservoir.

In dry seasons water pumped from drilled wells by two small gas pumps and a windmill pump. Average flow of wells 72,000 gallons daily during ordinary seasons.

DISTRIBUTION

By gravity through 8-inch main; pressure about 54 pounds.

CONSUMPTION

Supply to 700 people; 135 taps. No means of measuring consumption; assuming 30 gallons per capita, would be 21,000 gallons daily, all domestic.

WEST PITTSBURGH (TAYLOR TWP.), LAWRENCE COUNTY

WEST PITTSBURGH WATER COMPANY
(The Garland Corporation)

Estimated 1915 population, 750a

LOCATION

Southern central Lawrence County, along east bank of Beaver River; on Pittsburgh & Lake Erie R. R. and Baltimore & Ohio R. R.

INDUSTRIES

Nut and rivet works, two conduit plants, radiator works and silk mill.

WATER SUPPLY

West Pittsburgh Water Co., incorporated 1902 for Taylor Township. Works built in 1905. Owned by West Pittsburgh Realty Co., subsidiary of Garland Corporation of Pittsburgh.

SOURCE AND COLLECTION

Beaver River; a 6 inch suction line to 1,000,000 gallon and 1,440,000 gallon Snider & Hughes pumps. Water pumped through 8-inch force main direct to system, with 4-inch connection to 56,000 gallon and 20,000 gallon equalizing tanks, 63 feet above pumps, and to 65,000 gallon tank on hill east of village, at elevation 300 feet above pumps; 800 hp. boilers.

DISTRIBUTION

By pumping direct to distributing system; pressure 30 to 110 pounds; 3.3 miles distributing mains, 2-inch and 4-inch, 22 fire hydrants, 3-inch.

CONSUMPTION

Supply to 712 people; 109 taps, all metered. Average daily consumption 65,000 gallons, 46.2% domestic and 53.8% industrial.

WOODLAWN BOROUGH, BEAVER COUNTY

WOODLAWN WATER COMPANY

Population 1910 census, 1,396 (inc. 1908). Estimated 1915 population, 8,000a

LOCATION

Southeastern Beaver County, along west bank of Ohio River; on Pittsburgh and Lake Erie R. R. and Aliquippa and Southern R. R. Built-up business section in Logstown Run valley and residential section on several hills. Range of elevation 225 feet.

INDUSTRIES

Jones & Laughlin Steel Co.'s Aliquippa works, consisting of blast furnaces, steel works and finishing mills.

WATER SUPPLY

Woodlawn Water Co., incorporated 1909 for Woodlawn Borough by stockholders of Jones and Laughlin Steel Co. Works started by steel company 1907.

SOURCE AND COLLECTION

Sixteen drilled wells, averaging about 40 feet deep, six of 8-inch and ten of 10-inch diameter, on river bank, a short distance upstream from United States Government dam No. 4; wells connected to pumping station by 8, 10 and 12-inch suction lines. Water pumped by two 250,000 gallon and two 570,000 gallon electrically-driven Deane triplex pumps through 8-inch and 10-inch force mains, which unite to form a single 16-inch main direct to system. Floor space leased in steel company's pumping station.

DISTRIBUTION

By pumping direct to system, with 6-inch connection to two 175,000 gallon steel equalizing tanks on hill in southern part of borough; pressure 30 to 50 pounds, can be increased to 164 pounds for fire purposes. Distributing mains (including force mains), as follows:

Size (inches),	16	12	10	8	6	4	3	Total
Length (miles),	0.03	0.26	1.25	1.89	2.58	4.27	0.71	10.99
Per cent.,	0.3	2.4	11.4	17.2	23.4	38.8	6.5	100

Seventy-eight fire hydrants, 86% 5¾-inch and 14% 5-inch.

CONSUMPTION

Supply to 7,500 people; 832 taps, all metered, 3 industrial. Average daily consumption 680,300 gallons, 39.5% domestic and 60.5% industrial; measured by pump displacement, allowing 25% for slippage; maximum consumption 1,103,220 gallons, minimum 302,240.

INDUSTRIAL

Industrial supply to steel plant delivered by 8 centrifugal pumps, 85,000,000 gallons combined capacity, direct to plant. Connection to equalizing standpipe. Consumption not given.

ZELIENOPLE BOROUGH, BUTLER COUNTY

MUNICIPAL WATER WORKS

Population 1910 census, 1,388; increase since 1900, 425. Estimated 1915, 1,600

LOCATION

Southwestern Butler County, along south bank of Connoquenessing Creek; on Baltimore & Ohio R. R.

INDUSTRIES

In agricultural, oil producing and bituminous coal district; Iron City Manufacturing Co., machine shop and foundry and a planing mill; flexible bolt works and carriage factory under construction.

WATER SUPPLY

Municipal works installed in 1893.

SOURCE AND COLLECTION

Schold Run (also known as Kechner Run), a tributary of Connoquenessing Creek, from north, opposite borough. Pumping station, 1,200 feet from mouth, has 6-inch intake pipe into run and 8-inch emergency intake to Connoquenessing Creek. Water pumped through 8-inch force main directly to borough system. Pumping equipment one 324,000 gallon Deming pump and an emergency 648,000 gallon Deming pump. Water very hard.

DISTRIBUTION

By pumping direct to system, with 8-inch connection to two 300,000 gallon equalizing reservoirs in southeastern part of borough. Pressures 38 to 114 pounds; 3.8 miles distributing mains, 4-inch to 8-inch; 36 fire hydrants, 4-inch.

CONSUMPTION

Supply to 800 people; 300 taps. Average daily consumption 120,000 gallons; 75% domestic and 25% industrial. Supply to 800 people; 300 taps. Average daily consumption 120,000 gallons, 75% domestic and 25% industrial.

APPENDIX

TABLE NO. 17

Complete List and Index of Water Companies

Name	Date of incorporation	Territory covered by charter	Present status	Page
Aaronsburg Water Co.,	Jan. 29, 1844,	Aaronsburg, Centre County,	Active,	607
Abington Water Co.,	Nov. 8, 1900,	Abington Township, Montgomery County,	Dissolved,	
Acker Water Supply Co.,	Mar. 14, 1905,	Howe Township, Perry County,	Sold to Nekoda Water Supply Co.,	809
Acme Water Co.,	May 11, 1904,	Crafton Borough, Allegheny County,	Affidavit of dissolution,	
Adams Water Co.,	Sept. 9, 1902,	Adams Township, Cambria County,	Merged into Beaverdale Water Co.,	1090
Agnes Water Co. of Cresson,	Oct. 22, 1903,	Cresson Township, Cambria County,	Not in operation,	
Agnew Water Co.,	Feb. 24, 1903,	Conway Borough, Beaver County,	Never operated,	
Albion Water Co.,	Feb. 3, 1902,	Albion Borough, Erie County,	Dissolved,	
Albion Water Co.,	May 29, 1908,	Albion Borough, Erie County,	Sold to borough,	
Allaire Water Co.,	July 5, 1901,	Moon Township, Beaver County,	Active,	1267
Allegheny Mountain Water Co.,	Jan. 15, 1900,	Lilly Borough, Galitzin and Washington Townships, Cambria County	Sold to Mountain Spring Water Co., now Summit Water Supply Co.	1090
Allegheny Township Water Co.,	July 20, 1900,	Allegheny Township, Westmoreland County,	Not in operation,	
Allegheny Township Water Co.,	Nov. 9, 1900,	Allegheny Township, Cambria County,	Sold to Cambria County Water Supply Co.	505
Allegheny Valley Water Co.,	April 17, 1906,	Cheswick Borough, Allegheny County,	Active,	1113
Allegheny Water Co. (The),	April 22, 1892,	Logan Township, Blair County,	Active,	663
Allen Spring Water Co.,	Dec. 11, 1901,	Allen Township, Cumberland County,	Merged into Riverton Cons. Water Co.,	798
Allen Water Co.,	Oct. 25, 1897,	Allen Township, Washington County,	Affidavit of dissolution,	
Allen & East Allen Water Co.,	Oct. 3, 1902,	East Allen Township, Northampton County,	Affidavit of dissolution,	
Allen Crane Water Co.,	June 25, 1901,	Allen Township, Northampton County,	Merged into the Clear Springs Water Co.,	116
Allentown Water Co.,	Jan. 29, 1859,	Allentown Borough, Lehigh County,	Bought by city,	105
Allen Township Water Co.,	June 26, 1901,	Allen Township, Northampton County,	Affidavit of dissolution,	
Alliance Water Co.,	June 11, 1901,	Alliance Borough, Northampton County,	Merged into the Clear Springs Water Co.,	116
Allison Park Water Co.,	Jan. 23, 1911,	Hampton Township, Allegheny County,	Active,	1034
Aliquippa Water Co.,	Aug. 1, 1901,	Aliquippa Borough, Beaver County,	Affidavit of dissolution,	
Altamonte Water Supply Co.,	Dec. 17, 1903,	Gallitzin Borough, Cambria County,	Dissolved,	
Altman Water Co.,	April 24, 1903,	Black Lick Township, Indiana County,	Affidavit of dissolution,	
Altoona Gas and Water Co.,	May 6, 1858,	Altoona Borough, Blair County,	Sold to city in 1872,	660
Ambler Spring Water Co.,	May 23, 1892,	Ambler Borough, Montgomery County,	Active,	190
Ambridge Water Co.,	Jan. 15, 1906,	Harmony Township, Beaver County,	Dissolved,	
American Spring Water Co.,	Aug. 22, 1902,	East Lampeter Township, Lancaster County	Not in operation,	

Amity Water Co.,	Nov. 26, 1900,	Mifflin Township, Allegheny County,	Affidavit of dissolution,	
Anderson Water Co.,	Aug. 5, 1903,	Allegheny Township, Cambria County,	Not in operation,	
Angelica Water and Ice Co.,	May 3, 1875,	Cumru Township, Berks County,	Active,	221
Annville Water Co.,	Sept. 11, 1889,	Annville Village, Lebanon County,	Active,	737
Annville Water Co.,	Sept. 23, 1889,	Annville Village, Lebanon County,	Affidavit of dissolution,	
Ansonville Water Co. (The),	Sept. 22, 1890,	Ansonville, Clearfield County,	Active,	486
Anthracite Valley Water Co.,	Mar. 25, 1904,	Carbondale Township, Lackawanna County,	Active,	376
Anthracite Water Co. (The),	April 3, 1882,	Mahanoy Township, Schuylkill County,	Active,	617
Anthracite Water Co. of Coal Township,	May 18, 1885,	Coal Township, Northumberland County,	Active,	432
Antis Water Co.,	Mar. 11, 1905,	Antis Township, Blair County,	Sold to Blair Gap Water Supply Co.,	681
Apollo Springs Water Co. (The),	May 1, 1893,	Pittsburgh City, Allegheny County,	Dissolved,	
Apollo Water Works Company (The),	June 7, 1884,	Apollo Borough, Armstrong County,	Active,	1035
Arcadia Water Co.,	Jan. 30, 1901,	Montgomery Township, Indiana County,	Active,	486
Archbald Water Co. (The),	Oct. 11, 1875,	Archbald Village, Luzerne County,	Owned by Olyphant Water Co.,	420
Arendtsville Water Co. (The),	April 26, 1910,	Arendtsville Borough, Adams County,	Active,	738
Arizona Water Co.,	July 22, 1904,	Emsworth Borough, Allegheny County,	Sold to the Ohio Valley Water Co.,	1286
Arlington Water Co.,	Oct. 14, 1902,	Scott Township, Allegheny County,	Has done no work,	
Armstrong Water Co.,	Aug. 27, 1886,	Kittanning Borough, Armstrong County,	Active,	989
Arnot Water Co. (The),	Sept. 14, 1897,	Bloss Township, Tioga County,	Active,	309
Artesian Water Co.,	July 9, 1883,	Carbondale Borough, Lackawanna County,	Merged into Penn Water Co.,	
Artesian Water Co.,	Dec. 14, 1899,	Lackawanna County,	Not in operation,	
Artesian Water Co. of Wilkinsburg,	April 16, 1902,	Wilkinsburg Borough, Allegheny County,	Merged into the Pennsylvania Water Co.,	1125
Arydale Water Supply Co.,	Mar. 11, 1905,	Brady Township, Huntingdon County,	Sold to the Greenmount Water Supply Co.	809
Ashland Gas and Water Co.,	Mar. 4, 1865,	Ashland Borough, Schuylkill County,	Not in operation,	
Askam Water Co.,	Jan. 29, 1896,	Warrior Run Borough, Luzerne County,	Has done no work,	
Aspers Water Co.,	Jan. 11, 1913,	Aspers Village, Menallen Township, Adams County	Active,	739
Aspinwall Water Co.,	Feb. 14, 1896,	Aspinwall Borough, Allegheny County,	Dissolved,	
Atglen Water Co.,	Mar. 25, 1904,	Atglen Borough, Chester County,	Active,	740
Auburn Water Co. (The),	Sept. 20, 1897,	Auburn Borough, Schuylkill County,	Active,	191
Aughwick Water Co.,	Feb. 4, 1905,	Mount Union Borough, Huntingdon County,	Has done no work,	
Avoca Borough Water Co.,	July 16, 1901,	Avoca Borough, Luzerne County,	Active,	443
Avondale Water Co.,	May 13, 1901,	Avondale Borough, Chester County,	Active,	192
Avonmore Water Co.,	July 10, 1901,	Avonmore Borough, Westmoreland County,	Has done no work,	
Axleton Water Co.,	Sept. 29, 1902,	Forward Township, Allegheny County,	Active,	1206
Baden Water Co.,	Mar. 31, 1902,	Baden Borough, Beaver County,	Affidavit of dissolution,	
Bakerton Water Co.,	Aug. 5, 1901,	Carroll Township, Cambria County,	Active,	489
Bald Eagle Twp. Water Co.,	June 9, 1913,	Bald Eagle Township, Clinton County,	Active,	547
Bald Eagle Water Co.,	Aug. 2, 1897,	Tyrone Borough, Blair County,	Active,	686
Baldwin Water Co.,	Mar. 9, 1899,	Baldwin Township, Allegheny County,	Affidavit of dissolution,	
Bangor Water Co. (The),	June 17, 1884,	Bangor, Northampton County,	Active,	61

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
Banksville Water Co.,	May 20, 1904,	Union Township, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Bark Water Co.,	Mar. 29, 1889,	Pike Township, Clearfield County,	Never operated,	
Barnesboro Water Co.,	Sept. 30, 1896,	Barnesboro, Cambria County,	Dissolved,	
Barnesboro Water Co.,	Aug. 7, 1899,	Barnesboro, Cambria County,	Merged into Northern Cambria Water Co.	520
Barree Water Supply Co.,	Mar. 11, 1905,	Porter Township, Huntingdon County,	Sold to Trout Run Water Supply Co.,	809
Beachmont Water Co.,	Nov. 26, 1900,	Collier Township, Allegheny County,	Affidavit of dissolution,	
Bear Creek Water Co.,	Nov. 19, 1903,	Bear Creek Township, Luzerne County,	Not in operation,	
Bear Gap Water Co.,	Jan. 15, 1889,	Mt. Carmel Township, Northumberland County	Active,	410
Beaver Brook Water Co.,	Jan. 22, 1896,	Beaver Brook Village, Luzerne County,	Active,	371
Beaver Creek Water Co.,	Oct. 24, 1900,	Swatara Township, Dauphin County,	Active,	817
Beaverdale Water Co.,	Oct. 18, 1902,	Adams and Summerhill Townships, Cambria County (merger)	Sold to the Summit Water Supply Co.,	1040
Beaverdale Water Co.,	Sept. 28, 1900,	Summerhill Township, Cambria County,	Merged into the Beaverdale Water Co.,	1040
Beaverdam Water Co.,	Dec. 5, 1902,	Gallitzin Township, Cambria County,	Leased by Cambria County Water Supply Co.	505
Beaver Falls Water Co.,	April 2, 1870,	Beaver Falls, Beaver County,	Not in operation,	
Beaver Meadow Water Co. (The),	June 19, 1893,	Banks Township, Carbon County,	Active,	109
Beaver Springs Water Co.,	Sept. 9, 1904,	Beaver Springs Village, Snyder County,	Active,	609
Beavertown Water Co.,	Sept. 9, 1904,	Beavertown Village, Snyder County,	Has done no work,	
Beaver Valley Water Power Co.,	1902,	Beaver County,	Owned by Beaver Valley Water Co.,	1256
Beaver Valley Water Co.,	Nov. 1, 1901,	Economy Township, Beaver County,	Active,	1255
Bedford Water Co.,	May 6, 1850,	Bedford Borough, Bedford County,	Not in operation,	
Beech Cliff Water Co.,	June 29, 1904,	Baldwin Township, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Belle Vernon Water Co.,	May 22, 1892,	Belle Vernon Borough, Fayette County,	Has done no work,	
Belle Vernon Water Co.,	Aug. 27, 1894,	Belle Vernon Borough, Fayette County,	Merged into the Belle Vernon Water Co.,	1152
Belle Vernon Water Co.,	Mar. 4, 1908,	Fayette and Westmoreland Counties (merger)	Active,	1152
Belleville Water Co.,	Oct. 6, 1902,	Union Township, Mifflin County,	Active,	700
Bellevue Water Co.,	Oct. 18, 1888,	Bellevue, Lackawanna County,	Active,	443
Bellevue Water Co.,	July 5, 1892,	Bellevue Borough, Allegheny County,	Sold to the Valley Consolidated Water Co.	1286
Bell Water Co. (The),	Mar. 14, 1893,	Sabbath Rest Village, Blair County,	Has done no work,	

Bellwood Water Works Co.,	Aug. 3, 1893,	Antis Township, Blair County,	Active,	665
Belmont Water Co.,	Dec. 30, 1901,	Fell Township, Lackawanna County,	Active,	438
Beltzhoover Water Co. (The),	June 27, 1892,	Beltzhoover Borough, Allegheny County,	Sold to the St. Clair Water Co.,	1164
Belvoir Water Co.,	Nov. 29, 1904,	Antis Township, Blair County,	Sold to the Blair Gap Water Supply Co.,	681
Ben Avon Valley Water Co.,	May 27, 1903,	(Merger) Allegheny County,	Has done no work,	
Ben Avon Valley Water Co.,	May 28, 1902,	Ben Avon Borough, Allegheny County,	Merged into the Ben Avon Valley Water Co.	
Ben Avon Water Co.,	Aug. 25, 1896,	Ben Avon Borough, Allegheny County,	Not in operation,	
Bennett Water Co.,	Jan. 3, 1888,	Millvale Borough, Allegheny County,	Affidavit of dissolution,	
Ben's Creek Water Co.,	Feb. 15, 1905,	Portage Township, Cambria County,	Active,	1107
Bentleyville Water Co.,	Jan. 20, 1910,	Bentleyville Borough, Washington County,	Work not yet started,	
Benton Water Supply Co.,	May 24, 1900,	Benton Borough, Columbia County,	Active,	372
Benwood Water Co.,	April 8, 1903,	Stowe Township, Allegheny County,	Sold to the Ohio Valley Water Co.,	1286
Berlin Water Co.,	Dec. 13, 1901,	Berlin Borough, Somerset County,	Active,	1153
Berryhill-Klondike-McCoy Spring Water Co.,	Sept. 29, 1902,	Connellsville Township, Fayette County,	Never operated,	
Berrysburg Water Co.,	April 19, 1850,	Berrysburg, Dauphin County,	Not in operation,	
Berry Springs Water Co.,	Jan. 20, 1909,	Upper Paxton Township, Dauphin County,	Active,	642
Berwick Water Co.,	Jan. 27, 1818,	Berwick, Columbia County,	Active,	373
Berwyn Water Co.,	July 23, 1895,	Easttown Township, Chester County,	Sold to North Springfield Water Co.,	258
Bessemer Water Co.,	Oct. 30, 1901,	Masontown Borough, Fayette County,	Affidavit of dissolution,	
Bethany Water Co.,	Jan. 21, 1828,	Bethany, Wayne County,	Has done no work,	
Bethel Water Co.,	July 29, 1904,	Bethel Township, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Bethlehem City Water Co.,	Sept. 10, 1903,	Bethlehem Township, Northampton County,	Merged into Bethlehem Water Co.,	110
Bethlehem City Water Co.,	1914,	Salisbury Township, Lehigh County,	Active,	152
Bethlehem Water Co.,	Dec. --, 1914,	Lehigh and Northampton Counties,	Active,	110
Bethlehem Consolidated Water Co.,	April 18, 1902,	Merger (Lehigh and Northampton Counties),	Sold to Bethlehem City Water Co.,	152
Bethlehem Consolidated Water Co.,	Jan. 7, 1902,	Bethlehem Township, Northampton County,	Merged into Bethlehem Cons. Water Co.,	152
Bethlehem, South, Gas and Water Co. (The),	April 13, 1864,	So. Bethlehem and villages adjoining in Saucon, Salisbury and Hanover Townships, Lehigh and Northampton Counties	Merged into Bethlehem Cons. Water Co.,	152
Bethlehem Water Co.,	Feb. 24, 1845,	Bethlehem, Northampton County,	Sold to municipality,	112
Biglerville Water Co.,	Sept. 5, 1908,	Biglerville Borough, Adams County,	Active,	741
Big Run Water Co.,	May 28, 1900,	Big Run Borough, Jefferson County,	Active,	986
Birdsboro Water Co.,	Mar. 19, 1900,	Birdsboro, Berks County,	Active,	193
Black Bear Water Co.,	Dec. 19, 1907,	Morris Township, Clearfield County,	Active,	522
Black Lick Water Co.,	Dec. 28, 1906,	Black Lick Township, Cambria County,	Active,	1120
Blackwood Water Co.,	Oct. 6, 1904,	Reilly Township, Schuylkill County,	Active,	743
Blair Gap Water Supply Co.,	Jan. 30, 1905,	Merger (Blair County),	Active,	680
Blaisdall Water Co. (The),	Feb. 26, 1892,	Bradford Township, McKean County,	Affidavit of dissolution,	
Blakeley Water Co. (The),	Jan. 22, 1884,	Blakeley Borough, Lackawanna County,	Owned by Olyphant Water Co.,	420
Blakely Water Co.,	Jan. 17, 1889,	Blakeley Borough, Lackawanna County,	Has done no work,	
Blandburg Water Co.,	Jan. 19, 1905,	Reade Township, Cambria County,	Active,	491
Bloomfield Water and Sewer Co.,	1893,	New Bloomfield Borough, Perry County,	Active,	796
Bloomsburg Water Co. (The),	Sept. 27, 1879,	Bloomsburg, Columbia County,	Active,	375
Blossburg Water Co. (The),	Sept. 14, 1891,	Blossburg Borough, Tioga County,	Active,	310

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
Blue Knob Water Supply Co.,	Jan. 4, 1905,	Juniata Township, Blair County,	Merged into Blair Gap Water Supply Co.,	680
Blue Mountain Consolidated Water Co.,	Dec. 9, 1902,	(Merger) Northampton County,	Active,	138
Blue Mountain Water Supply Co.,	Sept. 28, 1900,	Smithfield Township, Monroe County,	Not in operation,	
Blue Ridge Water Supply Co.,	Aug. 1, 1906,	Washington Township, Franklin County,	Active,	840
Blue Ridge Water Supply Co.,	Oct. 31, 1902,	Walnutport Village, Northampton County,	Active,	160
Blue Water Co.,	Sept. 18, 1907,	N. Belle Vernon Borough, Westmoreland County	Merged into Belle Vernon Water Co.,	1152
Boalsburg Water Co.,	Sept. 2, 1902,	Boalsburg, Centre County,	Active,	543
Boiling Springs Water Co. (The),	June 9, 1913,	South Middleton Township, Cumberland County	Active,	745
Bolivar Water Co.,	Aug. 10, 1887,	Bolivar Borough, Westmoreland County,	Affidavit of dissolution,	
Borough of Chartiers Water Co.,	Dec. 12, 1893,	Chartiers Borough, Allegheny County,	Sold to Monongahela Water Co.,	
Borough Water Co.,	Sept. 24, 1889,	Montrose Borough, Susquehanna County,	Never operated,	
Borough Water Co.,	April 8, 1890,	Rochester Borough, Beaver County,	Affidavit of dissolution,	
Boyertown Water Co.,	April 18, 1856,	Boyertown, Berks County,	Sold to municipality,	197
Braddock Water Co.,	Nov. 18, 1882,	Braddock Borough, Allegheny County,	Not in operation,	
Bradford County Water Co.,	Mar. 3, 1904,	Sayre Borough, Bradford County,	Never operated,	
Bradford Water Works Co. (The),	June 29, 1877,	Bradford Borough, McKean County,	Sold to municipality,	894
Brady Water Co.,	June 15, 1903,	East Brady, Clarion County,	Never operated,	
Branch Water Co.,	Mar. 18, 1903,	(Merger) Indiana County,	Affidavit of dissolution,	
Branch Water Co.,	Mar. 9, 1903,	Green Township, Indiana County,	Merged into Branch Water Co.,	
Bradenville Water Co.,	April 16, 1904,	Derry Township, Westmoreland County,	Dissolved,	
Brandywine Water Co. (The),	May 20, 1891,	North Lebanon Township, Lebanon County,	Not in operation,	
Briar Creek Water Supply Co.,	Mar. 25, 1904,	Briar Creek Township, Columbia County,	Active,	373
Briar Creek Water Co.,	May 9, 1901,	Briar Creek Township, Columbia County,	Has done no work,	
Bridgeport Water Co. (The),	Aug. 25, 1886,	Bridgeport Borough, Montgomery County,	Active,	233
Bridgeport Water Co. (The),	July 18, 1892,	Bridgeport Borough, Fayette County,	Merged into Brownsville Water Co.,	1156
Bridgeville Water Co.,	Nov. 26, 1900,	Upper St. Clair Township, Allegheny County	Affidavit of dissolution,	
Bridgewater Water Co.,	June 25, 1888,	Bridgewater Borough, Beaver County,	Never operated,	
Bright Run Water Co.,	Sept. 18, 1907,	Butler Township, Schuylkill County,	Dissolved,	
Brinton Water Co.,	Nov. 11, 1901,	Penn Township, Westmoreland County,	Merged into Trafford Water Co.,	1223
Bristol Township Water Supply Co.,	Dec. 5, 1904,	Bristol Township, Bucks County,	Has done no work,	

Bristol Water Co. (The),	Aug. 19, 1874,	Bristol, Bucks County,	Active,	
Bristol Water Improvement Co.,	Dec. 5, 1904,	Bristol Borough, Bucks County,	Sold to municipality,	114
Broad Mountain Water Co. (The),	Mar. 31, 1898,	Mahanoy City Borough, Schuylkill County,	Active,	
Brockway Crystal Water Co. (The),	Oct. 28, 1897,	Brockwayville Borough, Jefferson County,	Active,	966
Brookville Water Co.,	April 20, 1846,	Brookville, Jefferson County,	Not in operation,	
Brookville Water Co. (The),	Aug. 8, 1883,	Brookville Borough, Jefferson County,	Sold to municipality,	968
Brownsville Water Co.,	July 15, 1889,	Brownsville Borough, Fayette County,	Not in operation,	
Brownsville Water Co. (The),	July 18, 1892,	Brownsville Borough, Fayette County,	Merged into Brownsville Water Co.,	1156
Brownsville Water Co.,	Sept. 3, 1901,	(Merger) Fayette and Washington Counties,	Active,	1156
Brush Run Water Co.,	Oct. 22, 1900,	Mt. Pleasant Township, Westmoreland County	Active,	1157
Bryn Mawr Water Co.,	April 6, 1892,	Lower Merion Township, Montgomery County	Sold to Springfield Water Co.,	257
Buck Hill Water Co.,	April 14, 1902,	Barrett Township, Monroe County,	Active,	63
Buck Township Water Co.,	April 27, 1905,	Buck Township, Luzerne County,	Dissolved,	
Buckwha Water, Storage and Supply Co.,	Dec. 17, 1901,	Lower Towamensing Township, Carbon County	Affidavit of dissolution,	
Buffington Water Co.,	Dec. 28, 1900,	Buffington Township, Indiana County,	Active,	1121
Bundy's Water Co.,	Feb. 24, 1898,	Linesville Borough, Crawford County,	Active,	1281
Burnham Water Co.,	Dec. 1, 1899,	Derry Township, Mifflin County,	Sold to Reedsville Water Co.,	
Burrell Township Water Co.,	April 2, 1903,	Burrell Township, Indiana County,	Affidavit of dissolution,	1087
Bushkill Water Co.,	July 7, 1908,	Lehman Township, Pike County,	Active,	64
Butcher Spring Water Co. (The),	Mar. 5, 1894,	St. Clair Borough, Schuylkill County,	Active,	229
Butler Township Water Co.,	Aug. 23, 1910,	Butler Township, Schuylkill County,	Construction of works not yet completed,	
Butler Water Co. (The),	Nov. 2, 1877,	Butler Borough, Butler County,	Active,	1259
Cocalico Water Co. (The),	Jan. 28, 1892,	Ephrata Township, Lancaster County,	Affidavit of dissolution,	
Cairnbrook Water Co.,	April 25, 1913,	Shade Township, Somerset County,	Active,	1045
California Water Co.,	April 22, 1897,	California, Washington County,	Dissolved,	
California Water Co. (The),	May 2, 1899,	California, Coal Center, Elco, Roscoe, Stockdale and Allenport Boroughs and East Pike Run and Allen Townships, Washington County	Active,	1158
California Water Co. of California (The),	Sept. 26, 1894,	California Borough, Washington County,	Affidavit of dissolution,	
Caln Water Co.,	June 1, 1903,	Caln Township, Chester County,	Merged into Octoraro Water Co.,	809
Calvin Water Supply Co.,	Mar. 11, 1905,	Union Township, Huntingdon County,	Sold to Greenmount Water Supply Co.,	809
Cambria County Water Supply Co.,	Feb. 16, 1900,	Cambria County,	Active,	504
				1082
Cambridge Springs Water Co.,	June 6, 1898,	Cambridge Springs Borough, Crawford County	Never operated,	
Campbells Ledge Water Supply Co.,	Oct. 1, 1894,	Wyoming and Lackawanna Valleys, Luzerne County	Never operated,	
Camp Hill Spring Water Co. (The),	Oct. 19, 1897,	Camp Hill Borough, Cumberland County,	Affidavit of dissolution,	
Camp Hill Water Co.,	April 15, 1885,	Camp Hill Borough, Cumberland County,	Affidavit of dissolution,	
Campus Water Co.,	Sept. 29, 1908,	State College Borough, Centre County,	Active,	562

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
Canadensis Water Co.,	Mar. 2, 1903,	Barrett Township, Monroe County,	Active,	84
Canawacta Water Supply Co.,	Nov. 24, 1889,	Susquehanna County,	Active,	341
Canonsburg Water Co.,	Nov. 13, 1894,	Canonsburg Borough, Washington County,	Affidavit of dissolution,	
Canoe Township Water Co.,	Feb. 10, 1903,	Canoe Township, Indiana County,	Has done no work,	
Canton Township Water Co.,	Mar. 7, 1901,	Canton Township, Washington County,	Affidavit of dissolution,	
Canton Water Co. (The),	Sept. 20, 1877,	Canton Borough, Bradford County,	Not in operation,	312
Capous Water Co. (The),	June 24, 1895,	Scranton City, Lackawanna County,	Owned by Olyphant Water Co.,	420
Carbondale Citizens Water Co.,	Mar. 26, 1900,	Wayne, Lackawanna and Susquehanna Counties	Dissolved,	
Carbondale City Water Co.,	Mar. 21, 1866,	Carbondale, Lackawanna County,	Not in operation,	
Carbondale Consumers Water Co. (The),	May 24, 1892,	Carbondale City, Lackawanna County,	Has done no work,	
Carbondale Water Co. (The),	July 27, 1891,	Carbondale Township, Lackawanna County,	Owned by Consolidated Water Supply Co.	420
Carlisle Gas and Water Co.,	April 19, 1853,	Carlisle, Cumberland County,	Active,	746
Carlisle Water Co. (The),	Oct. 3, 1895,	Carlisle, Cumberland County,	Ruled out of existence by Supreme Court,	
Carnegie Water Co.,	May 20, 1904,	Carnegie Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Carrick Water Co.,	Nov. 26, 1900,	Baldwin Township, Allegheny County,	Affidavit of dissolution,	
Caskakee Water Co. of Taylor Township,	Oct. 22, 1902,	Taylor Township, Lawrence County,	Dissolved,	
Caskakee Water Co. of N. Beaver Township,	Nov. 7, 1902,	North Beaver Township, Lawrence County,	Dissolved,	
Cashtown Water Co. (The),	Nov. 15, 1894,	Cashtown, Adams County,	Active,	841
Cassandra Water Supply Co.,	Mar. 11, 1905,	Washington Township, Cambria County,	Sold to Mountain Springs Water Co., now Summit Water Supply Co.	1090
Castanea Water Co.,	June 9, 1913,	Castanea Township, Clinton County,	Active,	547
Castle Shannon Water Co.,	Oct. 14, 1902,	Baldwin Township, Allegheny County,	Has done no work,	
Catasauqua Water Co.,	June 26, 1901,	Catasauqua Borough, Lehigh County,	Affidavit of dissolution,	
Catawissa Water Co. (The),	June 29, 1882,	Catawissa Village, Columbia County,	Active,	377
Cecil Water Co.,	May 29, 1901,	Cecil Township, Washington County,	Sold to North Strabane Water Co.,	1264
Center Hall Water Co.,	Mar. 17, 1858,	Center Hall, Centre County,	Active,	610
Centerville Water Co.,	April 8, 1848,	Centerville, Crawford County,	Has done no work,	
Central Colliery Water Co.,	July 16, 1901,	Moosic Borough, Lackawanna County,	Active,	443
Centralia Water Co.,	Mar. 30, 1866,	Centralia, Columbia County,	Not in operation,	
Centralia Water Co.,	Oct. 7, 1904,	Centralia Borough, Columbia County,	Leased by Wyoming Valley Water Supply Co.	379
Central Water Co.,	Dec. 5, 1904,	Menallen Township, Fayette County,	Controlled by South West Water Co.,	1210

Centre Water Co.,	Nov. 18, 1902,	Centre Township, Columbia County,	Dissolved,	
Centre Water Co. of Centre Township,	April 24, 1903,	Centre Township, Columbia County,	Affidavit of dissolution,	
Century Water Co.,	Jan. 15, 1906,	Neville Township, Allegheny County,	Affidavit of dissolution,	
Chambersburg Water Co.,	Mar. 24, 1817,	Chambersburg, Franklin County,	Not in operation,	
Chambersburg Water Co.,	Jan. 31, 1849,	Chambersburg, Franklin County,	Never operated,	
Charleroi Water Co.,	June 17, 1890,	Fallowfield Township, Washington County,	Sold to Monessen Water Co.,	1203
Chartiers Township Water Co.,	May 29, 1901,	Chartiers Township, Washington County,	Sold to the Nort Strabane Water Co.,	1264
Chartiers Valley Water Co.,	Jan. 17, 1887,	Chartiers Township, Allegheny County,	Has done no work,	
Chartiers Valley Water Co.,	June 24, 1895,	McKees Rocks Borough, Allegheny County,	Not in operation,	
Chartiers Valley Water Co.	July 30, 1896,	Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Chartiers Water Co.,	Jan. 17, 1887,	Chartiers Borough, Allegheny County,	Has done no work,	
Chartiers Water Co.,	July 2, 1889,	Chartiers Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1161
Chatham Water Co.,	Aug. 22, 1901,	Oak Grove, Clinton County,	Active,	539
Cheltenham Water Co.,	Mar. 14, 1889,	Abington Township, Montgomery County,	Not in operation,	
Chelten Hills Water and Gas Co.,	Mar. 26, 1859,	Abington and Cheltenham Townships, Montgomery County	Not in operation,	
Cherryhill Township Water Co.,	Feb. 16, 1903,	Cherry Hill Township, Indiana County,	Has done no work,	
Cherry Hill Water Co.,	April 23, 1903,	Cherry Hill Township, Indiana County,	Charter held by Cambria County Water Supply Co.	505
Cherrytree Water Co.,	July 9, 1903,	Cherrytree Borough, Indiana County,	Active,	494
Chester Creek Pure Water Co.,	July 16, 1902,	Aston Township, Delaware County,	Affidavit of dissolution,	
Chester Creek Water Co.,	July 16, 1902,	Middletown Township, Delaware County,	Affidavit of dissolution,	
Chester Hill Water Co.,	June 28, 1901,	Chester Hill Borough, Clearfield County,	Dissolved,	
Chestnut Hill Water Co.,	April 24, 1856,	Chestnut Hill, Philadelphia County,	Sold to city of Philadelphia,	
Chestnut Ridge Water Co.,	Jan. 17, 1905,	Green Tree Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	
Cheswick Water Co.,	Aug. 14, 1900,	Springdale Township, Allegheny County,	Active,	1047
Chichester Water Co.,	Dec. 19, 1907,	Marcus Hook Borough, Delaware County,	Sold to New Chester Water Co.,	199
Chinchilla Water Co.,	Dec. 9, 1913,	Chinchilla Village, Lackawanna County,	Active,	381
Christiana Gravity Water Co. (The),	July 31, 1894,	Christiana Borough, Lancaster County,	Active,	747
Citizens Gas and Water Co.,	April 9, 1872,	Scranton, Lackawanna County,	Not in operation,	
Citizens Water Co. (The),	Feb. 16, 1882,	Coudersport, Potter County,	Sold to Consolidated Water Co. of Coudersport.	901
Citizens Water Co. (The),	July 20, 1883,	Canton Borough, Bradford County,	Active,	311
Citizens Water Co.,	Sept. 3, 1889,	Dorranceton Borough, Luzerne County,	Controlled by Spring Brook Water Supply Co.	443
Citizens Water Co.,	Feb. 7, 1890,	Braddock Township, Allegheny County,	Merged into Pennsylvania Water Co.,	1125
Citizens Water Co.,	July 20, 1904,	(Merger) Centre and Clearfield Counties,	Active,	516
Citizens Water Co. of Beaver Meadow (The),	July 9, 1895,	Banks Township, Carbon County,	Active,	109
Citizens Water Co. of Brownsville,	Oct. 3, 1901,	Brownsville Borough, Fayette County,	Has done no work,	
Citizens Water Co. of Cecil Township,	Oct. 9, 1911,	Cecil Township, Washington County,	Active,	1283
Citizens Water Co. of Coburn,	Dec. 4, 1901,	Coburn Village, Centre County,	Active,	612
Citizens Water Co. of Confluence,	Sept. 9, 1904,	Confluence Borough, Somerset County,	Active,	1170
Citizens Water Co. of Darby (The),	Mar. 7, 1892,	Darby Borough, Delaware County,	Sold to Springfield Water Co.,	262
Citizens Water Co. of Dauphin Borough,	Jan. 30, 1901,	Dauphin Borough, Dauphin County,	Merged into Dauphin Cons. Water Supply Co.	752
Citizens Water Co. of Dorranceton Borough,	1889,	Dorranceton Borough, Luzerne County,	Active,	443

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
Citizens Water Co. of DuBois,	May 18, 1883,	DuBois Borough, Clearfield County,	Not in operation,	
Citizens Water Co. of Frackville,	May 26, 1902,	Frackville Borough, Schuylkill County,	Affidavit of dissolution,	
Citizens Water Co. of Gordon,	Oct. 9, 1888,	Gordon Village, Schuylkill County,	Active,	620
Citizens Water Co. of Haverford Township,	Aug. 26, 1901,	Haverford Township, Delaware County,	Sold to Springfield Water Co.,	257
Citizens Water Co. of Hyndman,	Dec. 4, 1902,	Hyndman Borough, Bedford County,	Dissolved,	
Citizens Water Co. of Kittanning,	April 22, 1905,	Kittanning Borough, Armstrong County,	Sold to Armstrong Water Co.,	990
Citizens Water Co. of Laceyville (The),	Oct. 23, 1893,	Laceyville Borough, Wyoming County,	Sold to municipality,	323
Citizens Water Co. of Lewistown,	Mar. 11, 1901,	Lewistown Borough, Mifflin County,	Merged into Lewistown-Reedsville Water Co.	701
Citizens Water Co. of McDonald, Pa. (The),	Sept. 21, 1893,	McDonald Borough, Washington County,	Active,	1283
Citizens Water Co. of Middle Paxton Twp.,	Jan. 30, 1901.	Middle Paxton Township, Dauphin County,	Merged into Dauphin Consolidated Water Supply Co.	752
Citizens Water Co. of Milton,	June 15, 1900,	Milton Borough, Northumberland County,	Owned by White Deer Mountain Co.,	587
Citizens Water Co. of Mt. Pleasant Township,	Oct. 9, 1911,	Mt. Pleasant Township, Washington County,	Active,	1283
Citizens Water Co. of New Bethlehem (The),	Aug. 16, 1882,	New Bethlehem Borough, Clarion County,	Merged into Citizens Water Co. of New Bethlehem	993
Citizens Water Co. of New Bethlehem,	Nov. 30, 1904,	(Merger) Armstrong and Clarion Counties,	Active,	992
Citizens Water Co. of North Fayette Township	Oct. 9, 1911,	North Fayette Township, Allegheny County,	Active,	1283
Citizens Water Co. of Philipsburg (The),	Jan. 19, 1897,	Philipsburg Borough, Centre County,	Merged into Citizens Water Co.,	516
Citizens Water Co. of Pittsburgh (The),	Nov. 18, 1892,	Pittsburgh City, Allegheny County,	Has done no work,	
Citizens Water Co. of Robinson Township,	Oct. 9, 1911,	Robinson Township, Washington County,	Active,	1283
Citizens Water Co. of Scottdale,	July 17, 1888,	Scottdale Borough, Westmoreland County,	Active,	1219
Citizens Water Co. of Smith Township,	Oct. 9, 1911,	Smith Township, Washington County,	Not operating,	1283
Citizens Water Co. of South Fayette Township	Oct. 9, 1911,	South Fayette Township, Allegheny County.	Active,	1283
Citizens Water Co. of Susquehanna Township,	Jan. 30, 1901,	Susquehanna Township, Dauphin County,	Merged into Dauphin Consolidated Water Supply Co.	752
Citizens Water Co. of Tower City (The),	June 6, 1898,	Tower City, Schuylkill County,	Active,	639
Citizens Water Co. of Tremont,	Jan. 27, 1905,	Tremont Borough, Schuylkill County,	Never operated,	
Citizens Water Co. of Wapwallopen, Pa.,	June 13, 1894,	Wapwallopen, Luzerne County,	Active,	440

Citizens Water Co. of Washington, Pa. (The),	Jan. 7, 1886,	Washington Borough, Washington County,	Active,	1307
Citizens Water Co. of West Sadsbury, Pa.,	June 1, 1903,	West Sadsbury Township, Chester County,	Merged into Octoraro Water Co.,	809
Citizens Water Co. of Whitemarsh Twp.,	June 20, 1898,	Whitemarsh Township, Montgomery County	Sold to N. Springfield Water Co.,	257
Citizens Water Co. of Wilkes-Barre (The),	Dec. 31, 1894,	Wilkes-Barre City, Luzerne County,	Not in operation,	
Citizens Water and Gas Light Co. of Scranton, Pa. (The)	May 3, 1854,	Scranton, Hyde Park and Dunmore, Lackawanna County	Not in operation,	
Citizens Water and Gas Co. of Williamsport,	Mar. 24, 1865,	Williamsport, Newberry and Jaysburg, Lycoming County	Merged into Williamsport Water Co.,	593
City of New Castle Water Co. (The),	Mar. 8, 1881,	New Castle City, Lawrence County,	Merged into City of New Castle Water Co.	1293
City of New Castle Water Co.,	Aug. 15, 1902,	(Merger) Lawrence County,	Active,	1292
City Water Co. of Homestead (The),	April 5, 1886,	Homestead Borough, Allegheny County,	Never operated,	
City Water Co. of Scranton,	Sept. 16, 1903,	Scranton City, Lackawanna County,	Active,	431
Clarion Water Co.,	Mar. 3, 1887,	Clarion Borough, Clarion County,	Active,	972
Clark's Summit Water Co. (The),	Feb. 14, 1893,	South Abington Township, Lackawanna County	Active,	312
Clear Brook Water Co.,	Sept. 3, 1889,	Kingston Township, Luzerne County,	Active,	443
Clearfield Water Co. (The),	Jan. 3, 1882,	Clearfield, Clearfield County,	Active,	495
Clear Springs Water Co. (The),	May 15, 1899,	Lehigh and Northampton Counties,	Merged into Clear Springs Water Co.,	116
Clear Springs Water Co.,	April 10, 1902,	(Merger) Lehigh and Northampton Counties,	Active,	115
Clear Spring Water Co.,	July 3, 1900,	Jackson Township, Monroe County,	Not in operation,	
Clearview Water Supply Co.,	Mar. 11, 1905,	Milford Township, Juniata County,	Active,	711
Cleona Water Co.,	April 6, 1909,	North Lebanon Township, Lebanon County,	Active,	748
Clifton Heights Water Co. (The),	Mar. 24, 1886,	Clifton Heights Borough, Delaware County,	Sold to Springfield Water Co.,	257
Clifton Springs Water Co.,	Nov. 8, 1900,	Clifton Township, Lackawanna County,	Not in operation,	
Clifton Water Co.,	Jan. 13, 1886,	Clifton Borough, Delaware County,	Has done no work,	
Clinton Water Co. (The),	Mar. 12, 1891,	Clinton Township, Wayne County,	Owned by Consolidated Water Supply Co.	420
Clinton Water Co.,	Nov. 8, 1901,	Pine Creek Township, Clinton County,	Affidavit of dissolution,	
Cloe Water Co.,	Dec. 9, 1912,	Bell Township, Jefferson County,	Active,	970
Cloverdale Water Co.,	April 23, 1903,	Grant Township, Indiana County,	Charter held by Cambria County Water Supply Co.	505
Clymer Water Co. of Indiana,	April 26, 1886,	Indiana Borough, Indiana County,	Active,	1064
Clymer Water Co. of West Indiana,	April 26, 1886,	West Indiana Borough, Indiana County,	Sold to Clymer Water Co. of Indiana,	1065
Clymer Water Co. of White Township,	April 13, 1903,	White Township, Indiana County,	Dissolved,	
Coal Center Water Co.,	April 22, 1897,	Coal Center, Washington County,	Dissolved,	
Coal Center Water Co.,	Oct. 18, 1900,	Coal Center Borough, Washington County,	Sold to California Water Co.,	1158
Coal Center Water Works Co.,	Mar. 7, 1907,	Coal Center Borough, Washington County,	Sold to California Water Co.,	1158
Coalport Water Co.,	June 20, 1892,	Coalport Borough, Clearfield County,	Dissolved,	
Coburn Water Co.,	Sept. 13, 1900,	Coburn Village, Centre County,	Active,	612
Codorus Water Co.,	Sept. 18, 1900,	Delano Township, Schuylkill County,	Active,	

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
Cold Spring Water Co.,	Mar. 8, 1900,	St. Clair Borough, Blythe and East Norwegian Townships, Schuylkill County	Not in operation,	
Cold Spring Water Co.,	July 17, 1901,	Chester Hill Borough, Clearfield County,	Active,	516
Cold Spring Water Co.,	Mar. 29, 1870,	Titusville, Crawford County,	Never operated,	
Cold Spring Water Co. of New Brighton,	April 2, 1860,	New Brighton, Beaver County,	Not in operation,	
Cold Stream Water Co.,	July 6, 1896,	Philipsburg Borough, Centre County,	Affidavit of dissolution,	
Colerain Water Co.,	June 1, 1903,	Colerain Township, Lancaster County,	Merged into Octoraro Water Co.,	809
Colfax Water Co.,	Feb. 10, 1903,	Grant Township, Indiana County,	Has done no work,	
College Hill Borough Water Co.,	May 15, 1901,	College Hill Borough, Beaver County,	Owned by Beaver Valley Water Co.,	1256
College Hill Water Co.,	Jan. 13, 1897,	College Hill Borough, Beaver County,	Affidavit of dissolution,	
College Hill Water Co. of Beaver Falls,	June 17, 1902,	College Hill Borough, Beaver County,	Never operated,	
Collier Water Supply Co.,	July 20, 1904,	Collier Township, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Collier Water Co. (The),	Jan. 17, 1887,	Collier Township, Allegheny County,	Has done no work,	
Collingdale Water Co. (The),	Dec. 22, 1892,	Collingdale Borough, Delaware County,	Sold to Springfield Water Co.,	258
Colonia Water Co.,	Oct. 22, 1901,	Moon Township, Beaver County,	Affidavit of dissolution,	
Colorado Water Co.,	July 22, 1904,	Ben Avon Borough, Allegheny County,	Sold to Ohio Valley Water Co.,	1286
Columbia Water Co.,	Mar. 29, 1823,	Columbia, Lancaster County,	Active,	749
Colver Water Co.,	April 25, 1913,	Cambria Township, Cambria County,	Active,	1049
Commercial Water Co.,	April 23, 1903,	Greene Township, Indiana County,	Charter held by Cambria County Water Supply Co.	505
Conemaugh and Franklin W. S. Co. (The),	May 16, 1893,	Conemaugh Borough, Cambria County,	Merged into Conemaugh and Franklin Water Co.	1054
Conemaugh and Franklin Water Co.,	Mar. 7, 1907,	(Merger) Cambria County,	Active,	1054
Conewago Township Water Co.,	Dec. 6, 1916,	Conemaugh Township, Adams County,	Active,	768
Conemaugh Water Co.,	April 9, 1872,	Blairsville, Indiana County,	Not in operation,	
Conestoga Water Co.,	June 1, 1903,	Conestoga Township, Lancaster County,	Merged into Octoraro Water Co.,	809
Confluence Water Co.,	May 18, 1903,	Confluence Borough, Somerset County,	Affidavit of dissolution,	
Connellsville and New Haven Gas and Water Co.	Mar. 7, 1871,	Connellsville and New Haven Boroughs, Fayette County	Not in operation,	
Connellsville Water Co. (The),	Mar. 21, 1883,	Connellsville Borough, Fayette County,	Active,	1172
Connellsville Water Co.,	April 14, 1905,	Connellsville Township, Fayette County,	Sold to High Ridge Water Supply Co.,	1090
Conner Water Co.,	Feb. 24, 1905,	Cambria Township, Cambria County,	Leased by Cambria County Water Supply Co.	505
Conshohocken Gas and Water Co.,	May 12, 1871,	Conshohocken, Montgomery County,	Active,	257
Consolidated Water Co. (The),	Dec. 23, 1896,	Fayette and Washington Counties,	Merged into Brownsville Water Co.,	1156

Consolidated Water Co. of Coudersport,	July 26, 1900,	Coudersport Borough, Potter County,	Active,	900
Consolidated Water Supply Co.,	Feb. 28, 1899,	Lackawanna, Luzerne and Susquehanna Counties	Owned by Scranton Gas and Water Co.,	420
Consumers Water Co.,	Feb. 6, 1889,	Norristown Borough, Montgomery County,	Has done no work,	
Consumers Water Co. of Franklin Township, Westmoreland County	Dec. 8, 1903,	Franklin Township, Westmoreland County,	Active,	1178
Consumers Water Co. of Honesdale,	June 20, 1902,	Honesdale Borough, Wayne County,	Merged into Honesdale Cons. Water Co.,	74
Consumers Water Co. of Marple Township,	Aug. 23, 1901,	Marple Township, Delaware County,	Sold to Springfield Water Co.,	258
Consumers Water Co. of Montrose, Pa. (The),	Aug. 31, 1892,	Montrose Borough, Susquehanna County,	Active,	330
Consumers Water Co. of North Huntingdon Township, Westmoreland County	June 15, 1900,	North Huntingdon Township, Westmoreland County	Active,	1186
Consumers Water Co. of Plymouth Township,	June 20, 1898,	Plymouth Township, Montgomery County,	Sold to N. Springfield Water Co.,	257
Consumers Water Co. of Upper Darby (The),	Mar. 7, 1892,	Upper Darby Township, Delaware County,	Sold to Springfield Water Co.,	257
Consumers Water Co. of Wilkes-Barre,	Oct. 1, 1894,	Wilkes-Barre City, Luzerne County,	Has done no work,	
Contiguous Water Co.,	Mar. 14, 1889,	Cheltenham Township, Montgomery County,	Not in operation,	
Conyngham Water Co. (The),	Jan. 3, 1880,	Conyngham Village, Luzerne County,	Active,	
Cook Township Water Co.,	May 26, 1903,	Cook Township, Westmoreland County,	Dissolved,	
Coplay Water Co.,	Mar. 18, 1901,	Coplay Borough, Lehigh County,	Merged into Clear Springs Water Co.,	382
Coraopolis Water Co. (The),	Mar. 3, 1890,	Coraopolis Borough, Allegheny County,	Affidavit of dissolution,	116
Corry Gas and Water Co.,	Mar. 2, 1866,	Corry, Erie County,	Never operated as water company,	
Corry Water Supply Co.,	Jan. 24, 1886,	Corry City, Erie County,	Active,	
Cove Creek Water Co.,	April 14, 1905,	Penn Township, Perry County,	Affidavit of dissolution,	899
Covedale Water Co.,	Feb. 4, 1905,	Woodbury Township, Blair County,	Affidavit of dissolution,	
Cove Water Co.,	May 29, 1903,	Penn Township, Perry County,	Never operated,	
Crafton Water Co.,	July 2, 1889,	Chartiers Township, Allegheny County,	Dissolved,	
Crane Water Co.,	Aug. 14, 1895,	Catasauqua Borough, Lehigh County,	Merged into Clear Springs Water Co.,	116
Creekside Water Co.,	July 31, 1907,	Creekside Borough, Indiana County,	Active,	976
Crescent Beach Water Co. (The),	April 6, 1899,	Shannopin Village, Beaver County,	Active,	1303
Crescent Water Co.,	Mar. 16, 1900,	Crescent Township, Allegheny County,	Dissolved,	
Crescent Water Co. of Chartiers Township,	Dec. 29, 1892,	Chartiers Township, Allegheny County,	Has done no work,	
Cresco Water Co.,	Oct. 12, 1900,	Barrett Township, Monroe County,	Affidavit of dissolution,	
Cressona Water Co.,	Nov. 6, 1911,	Cressona Borough, Schuylkill County,	Active,	278
Cresson Water Co. (The),	June 29, 1896,	Cresson Township, Cambria County,	Active,	1051
Cross Fork Water Co. (The),	Oct. 31, 1894,	Stewardson Township, Potter County,	Active,	544
Croyle Township Water Co.,	Nov. 9, 1900,	Croyle Township, Cambria County,	Sold to Cambria County Water Supply Co.	505
Croyle Water Supply Co.,	Mar. 11, 1905,	Croyle Township, Cambria County,	Sold to Mountain Springs Water Supply Co., now Summit Water Supply Co.	1090
Crystal Lake Water Co.,	Aug. 19, 1867,	Carbondale Township, Luzerne County,	Owned by Consolidated Water Supply Co.	420

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
Crystal Pure Water Co.,	Nov. 29, 1905,	Mill Hall Borough, Clinton County,	Active,	547
Crystal Spring Water Co.,	April 11, 1863,	South Wilkes-Barre, Luzerne County,	Active,	443
Crystal Spring Water Co.,	April 29, 1874,	Downingtown, Chester County,	Not in operation,	
Crystal Springs Park Water Co.,	Mar. 7, 1907,	Highland Township, Elk County,	Active,	912
Crystal Springs Water Co (The),	May 5, 1893,	Austin Borough, Potter County,	Affidavit of dissolution,	
Crystal Water Co. (The),	July 2, 1896,	Cass Township, Schuylkill County,	Active,	216
Crystal Water Co.,	April 24, 1893,	Tidioute Borough, Warren County,	Affidavit of dissolution,	
Cumberland Water Co.,	April 15, 1895,	Boiling Springs Village, Cumberland County,	Sold to Carlisle Water Co.,	
Cummings Lake Water Supply Co.,	July 19, 1898,	Wyoming Valley, Luzerne County,	Has done no work,	
Cummings Water Co.,	Dec. 9, 1912,	Rayne Township, Indiana County,	Active,	969
Curwensville Water Co.,	Mar. 29, 1889,	Curwensville Borough, Clearfield County,	Active,	493
Dallastown Water Co. (The),	April 14, 1896,	Dallastown Borough, York County,	Merged into York County Cons. Water Co.	751
Dallas Water Co.,	Aug. 21, 1893,	Dallas Borough, Luzerne County,	Active,	384
Danielsville Water Co.,	Nov. 14, 1901,	Lehigh Township, Northampton County,	Never operated,	
Danville Water Co.,	Mar. 23, 1867,	Danville, Montour County,	Has done no work,	
Darby Water Co.,	Jan. 13, 1886,	Darby Borough, Delaware County,	Affidavit of dissolution,	
Dauphin Consolidated Water Supply Co.,	June 9, 1903,	(Merger) Cumberland and Dauphin Counties	Active,	752
Dauphin Water Co. (The),	Feb. 29, 1892,	Dauphin Borough, Dauphin County,	Affidavit of dissolution,	
Dawson Water Supply Co.,	Dec. 9, 1904,	Gallitzin Township, Cambria County,	Sold to Mountain Springs Water Co., now Summit Water Supply Co.	1090
Doylesford Water Co. of Pennsylvania,	Aug. 15, 1889,	Tredyffrin Township, Chester County,	Affidavit of dissolution,	
Dayton and Greenfield Water Co.,	Nov. 21, 1907,	Williams Township, Dauphin County,	Active,	643
Dean Water Supply Co.,	Sept. 21, 1904,	Dean Township, Cambria County,	Sold to Mountain Springs Water Co., now Summit Water Supply Co.	1090
Decatur Water Co.,	July 17, 1901,	Decatur Township, Clearfield County,	Active,	516
Deep Creek Water Co.,	Nov. 8, 1895,	Mt. Carmel Township, Northumberland County	Affidavit of dissolution,	
Deep Rock Water Co.,	Aug. 27, 1901,	Croyle Township, Cambria County,	Dissolved,	
Deep Well Water Co.,	July 20, 1911,	Part of Hazle Township, Luzerne County,	Not yet operating,	383
Delano Water Co.,	Nov. 13, 1901,	Delano Township, Schuylkill County,	Leased to Wyoming Valley Water Supply Co.	614
Delaware Water Co.,	Jan. 11, 1886,	Darby Township, Delaware County,	Never operated,	
Denison Township Water Co.,	Oct. 27, 1904,	Denison Township, Luzerne County,	Leased by Wyoming Valley Water Supply Co.	396
Derry Township Water Co.,	June 26, 1883,	Derry Township, Westmoreland County,	Sold to Latrobe Water Co.,	1076

Derry Water Co. (The),	May 4, 1887,	Derry Borough, Westmoreland County,	Sold to Westmoreland Water Co.,	1053
Derry Water Co.,	Jan. 3, 1899,	Derry Township, Dauphin County,	Not in operation,	
Devon Water Co. (The),	April 13, 1893,	Easttown Township, Chester County,	Affidavit of dissolution,	
Dewey Water Co.,	June 20, 1898,	Upper Merion Township, Montgomery County	Sold to N. Springfield Water Co.,	257
Diamond Water Co. of Hazleton,	June 24, 1887,	Hazleton, Luzerne County,	Active,	398
Dickerson Run Water Co.,	April 5, 1911,	New Dickerson Run Village, Fayette County,	Active,	1209
Dickson City Water Co.,	Jan. 17, 1889,	Dickson City Borough, Lackawanna County	Owned by Olyphant Water Co.,	420
Dillsburg Water Co.,	July 18, 1901,	Dillsburg Borough, York County,	Active,	755
Dingmans Ferry Water Co.,	Sept. 1, 1909,	Delaware Township, Pike County,	Active,	66
Disston Water Co.,	July 12, 1887,	Tacony, Philadelphia,	Active,	253
Domestic Water Co.,	Feb. 11, 1902,	Carroll Township, Washington County,	Leased by Monongahela City Water Co.,	1205
Donegal Township Water Co.,	Mar. 16, 1904,	Donegal Township, Westmoreland County,	Affidavit of dissolution,	
Donohoe Water Co.,	Aug. 8, 1902,	Salem Township, Westmoreland County,	Active,	1060
Donora Water Co.,	Oct. 3, 1906,	Carroll Township, Washington County,	So'd to Monessen Water Co.,	1208
Downingtown Gas and Water Co.,	Mar. 22, 1867,	Downingtown, Chester County,	Not in operation,	
Drifton Water Co. (The),	June 19, 1893,	Hazle Township, Luzerne County,	Active,	156
Driftwood Water Co.,	Sept. 19, 1899,	Driftwood Borough, Cameron County,	Active,	500
DuBois City Water Works Co. (The),	April 28, 1896,	DuBois Borough, Clearfield County,	Sold to municipality,	501
DuBois Water Co. (The),	Mar. 4, 1887,	DuBois Borough, Clearfield County,	Affidavit of dissolution,	
DuBois Water Co.,	May 16, 1889,	DuBois Borough, Clearfield County,	Not in operation,	
Dunbar Water Co.,	Jan. 30, 1902,	Dunbar Borough, Fayette County,	Has done no work,	
Dunbar Water Supply Co.,	Jan. 15, 1900,	Fayette and Westmoreland Counties,	Active,	1175
Dunbar Water Supply Co.,	Dec. 5, 1904,	Dunbar Township, Fayette County,	Active,	1175
Duncannon Home Water Co.,	July 10, 1893,	Duncannon Borough, Perry County,	Affidavit of dissolution,	
Duncannon Water Co. (The),	Sept. 24, 1891,	Duncannon, Perry County,	Affidavit of dissolution,	
Dunlap Water Co.,	Nov. 28, 1903,	Redstone Township, Fayette County,	Dissolved,	
Dunlo Water Co.,	April 21, 1897,	Dunlo, Cambria County,	Dissolved,	
Dunmore Gas and Water Co.,	April 5, 1867,	Dunmore, Luzerne County,	Owned by Scranton Gas and Water Co.,	420
Duquesne Water Co.,	April 13, 1888,	Pittsburgh, Allegheny County,	Not in operation,	
Duquesne Water Co.,	June 17, 1892,	Duquesne Borough, Allegheny County,	Affidavit of dissolution,	
Duquesne Water Co. No. 2,	Jan. 22, 1895,	Duquesne Borough, Allegheny County,	Affidavit of dissolution,	
Dushore Water Co. (The),	Aug. 8, 1893,	Dushore, Sullivan County,	Active,	579
Eagles Mere Water Co.,	Feb. 11, 1901,	Eagles Mere Borough, Sullivan County,	Active,	580
East Brady Water Co.,	April 13, 1893,	East Brady Borough, Clarion County,	Never operated,	
East Brady Water Co.,	April 23, 1895,	East Brady Borough, Clarion County,	Active,	977
East Buffalo Water Co.,	Oct. 19, 1900,	East Buffalo Township, Union County,	Owned by White Deer Mountain Water Co.	587
East Butler Water Co.,	May 1, 1908,	Summit Township, Butler County,	Active,	1279
East Deer Township Water Co. (The),	Sept. 23, 1897,	East Deer Township, Allegheny County,	Merged into Tarentum Water Co.,	1114
East Donegal Township Water Co.,	Nov. 13, 1912,	East Donegal Township, Lancaster County,	Merged into Florin Water Co.,	763
East End Water Co.,	Aug. 11, 1902,	Scott Township, Columbia County,	Dissolved,	

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
East End Water Co. of Logan Township,	Sept. 24, 1903,	Logan Township, Blair County,	Has done no work,	
East Harrisburg Water Co.,	April 15, 1895,	East End Village, Dauphin County,	Affidavit of dissolution,	
East Lebanon Water Co. (The),	April 2, 1891,	North Lebanon Township, Lebanon County,	Not in operation,	
East Mauch Chunk Water Co.,	Feb. 16, 1860,	East Mauch Chunk, Carbon County,	Active,	121
East McKeesport Water Co.,	June 30, 1896,	East McKeesport Borough, Allegheny County	Active,	1177
Eastmere Water Co. (The),	Jan. 19, 1899,	East End Village, Dauphin County,	Affidavit of dissolution,	
Easton Water Co.,	Mar. 24, 1817,	Easton, Northampton County,	Active,	68
East Pennsboro Water Co.,	Dec. 9, 1901,	East Pennsboro Township, Cumberland County	Merged into Riverton Consolidated Water Co.	798
East Pittsburgh Water Co.,	Jan. 10, 1888,	N. Versailles Township, Allegheny County,	Merged into Pennsylvania Water Co.,	1125
East Stroudsburg Water Co.,	Mar. 29, 1889,	East Stroudsburg Borough, Monroe County,	Never operated,	
Easttown Water Co.,	May 25, 1887,	Easttown Township, Chester County,	Affidavit of dissolution,	
East Tyrone Water Co. (The),	May 23, 1892,	East Tyrone Borough, Blair County,	Sold to Tyrone Gas and Water Co.,	687
Eastvale Water Co.,	Mar. 31, 1902,	Eastvale Borough, Beaver County,	Dissolved,	
East Washington Water Co.,	Feb. 25, 1901,	East Washington Borough, Washington County	Sold to Citizens Water Co. of Washington	1308
East Wheatfield Water Co.,	Dec. 28, 1900,	East Wheatfield Township, Indiana County,	Active,	1121
East Whiteland Water Co.,	July 23, 1895,	East Whiteland Township, Chester County,	Sold to Berwyn Water Co.,	258
Economical Water Co. of Schuylkill Haven,	Sept. 28, 1887,	Schuylkill Haven Borough, Schuylkill County	Never operated,	
Economy Water Co.,	June 4, 1902,	Harmony Township, Beaver County,	Affidavit of dissolution,	
Eddystone Water Co. (The),	April 19, 1887,	Ridley Township, Delaware County,	Sold to New Chester Water Co.,	199
Eddystone Water Co. (The),	Dec. 22, 1892,	Eddystone Borough, Delaware County,	Active,	258
Edge Hill Water Co.,	Dec. 24, 1894,	Springfield Township, Montgomery County,	Affidavit of dissolution,	
Edgemont Water Co.,	Mar. 4, 1908,	Chester Township, Delaware County,	Sold to New Chester Water Co.,	199
Edgeworth Extension Water Co.,	Aug. 6, 1900,	Franklin, Ohio, and Sewickley Townships, Allegheny County	Affidavit of dissolution,	
Edgeworth Water Co. (The),	June 20, 1883,	Leet Township, Allegheny County,	Active,	1279
Edwardsville Water Co.,	Sept. 3, 1889,	Edwardsville Borough, Luzerne County,	Active,	443
Eighth Ward Water Co. of Johnstown, Pa.,	April 17, 1906,	Eighth Ward of Johnstown City, Cambria County	Dissolved,	
Eldred Water Co.,	June 5, 1899,	Eldred Borough, McKean County,	Sold to Pike Mills Water Co., of Galeton, now Galeton-Eldred Water Co.	905
Elizabethtown Water Co. (The),	Jan. 4, 1895,	Elizabethtown Borough, Lancaster County,	Active,	758
Elizabethville Water Co.,	Sept. 9, 1889,	Elizabethville, Dauphin County,	Active,	615

Elizabeth Water Co.,	July 17, 1895,	Elizabeth Borough, Allegheny County,	Sold to Monongahela Valley Water Co.,	1185
Elliott Water Co.,	June 24, 1895,	Elliott Borough, Allegheny County,	Affidavit of dissolution,	
Ellwood Water Co.,	July 27, 1892,	Wayne Township, Lawrence County,	Active,	1271
Elm Water Co.,	April 13, 1893,	Lower Merion Township, Montgomery County	Affidavit of dissolution,	
Elmhurst Water Co. (The),	Jan. 11, 1892,	Elmhurst Borough, Lackawanna County	Dissolved,	
Emlenton Water Co.,	April 14, 1879,	Emlenton Borough, Venango County,	Active,	906
Emporium Water Co.,	July 15, 1886,	Emporium Borough, Cameron County,	Active,	503
Emsworth Valley Water Co.,	May 28, 1962,	Emsworth Borough, Allegheny County,	Merged into Ben Avon Valley Water Co.,	
Enola Water Co.,	Feb. 6, 1903,	East Pennsboro Township, Cumberland County	Sold to Dauphin Consolidated Water Co.,	752
Enterprise Water Co.,	June 26, 1901,	Hanover Township, Lehigh County,	Affidavit of dissolution,	
Enterprise Water Co. of Delaware County,	Aug. 6, 1901,	Upper Darby Township, Delaware County,	Affidavit of dissolution,	
Ephrata Water Co. (The),	1879,	Ephrata Village, Lancaster County,	Sold to municipality,	761
Erie Water and Gas Co.,	Mar. 16, 1865,	Erie, Erie County,	Never operated,	
Esplen Water Co.,	June 24, 1895,	Esplen Borough, Allegheny County,	Affidavit of dissolution,	
Etna Water Works,	June 21, 1888,	Etna Borough, Allegheny County,	Dissolved,	
Eureka Water Works,	May 11, 1904,	Chartiers Township, Allegheny County,	Affidavit of dissolution,	
Evans City Water Co. (The),	May 12, 1891,	Evansburg Borough, Butler County,	Sold to city,	1273
Everett Crystal Water Co. (The),	Oct. 7, 1892,	Everett Borough, Bedford County,	Has done no work,	
Everett Water Co. (The),	Feb. 3, 1885,	Everett Borough, Bedford County,	Dissolved,	
Everett Water Co.,	Sept. 27, 1888,	Everett Borough, Bedford County,	Active,	671
Everson Water Co.,	Mar. 22, 1901,	Upper Tyrone Township, Fayette County,	Sold to Citizens Water Co. of Scottdale,	1219
Evitts Creek Water Co.,	Sept. 8, 1911,	Cumberland Valley Township, Bedford County	Active,	843
Excelsior Water Co.,	May 11, 1904,	Esplen Borough, Allegheny County,	Affidavit of dissolution,	
Extension Water Co.,	Aug. 18, 1902,	Penbrook, Dauphin County,	Dissolved,	
Extension Water Co. of Penbrook,	Dec. 1, 1908,	Penbrook Borough, Dauphin County,	Controlled by Paxtang Consolidated Water Co.	775
Fairchance Water Co.,	Oct. 27, 1887,	Georges Township, Fayette County,	Merged into Youghgahela Water Co.,	1166
Fairchance Water Co. (The),	May 26, 1893,	Fairchance Borough, Fayette County,	Affidavit of dissolution,	
Fairfield Water Co.,	Aug. 10, 1887,	Fairfield Township, Westmoreland County,	Affidavit of dissolution,	
Fairmount Water Co.,	Nov. 19, 1901,	Red Bank Township, Clarion County,	Affidavit of dissolution,	
Fairview Spring Water Co.,	May 2, 1900,	Palmer Township, Northampton County,	Affidavit of dissolution,	
Fairview Township Water Co.,	Dec. 31, 1903,	Fairview Township, York County,	Merged into Riverton Consolidated Water Co.	798
Fairview Water Co.,	April 28, 1903,	Athens Borough, Bradford County,	Never operated,	
Fairview Water Co.,	July 12, 1906,	Mt. Pleasant Township, Westmoreland County	Dissolved,	
Fairview Water Co.,	Sept. 10, 1900,	Mt. Pocono Village, Monroe County,	Active,	78
Fall Brook and Newton Water Co.,	Nov. 24, 1891,	Carbondale City, Lackawanna County,	Owned by Consolidated Water Supply Co.	420

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
Falling Spring Water Co. (The),	June 25, 1894,	Marcy Township, Luzerne County,	Affidavit of dissolution,	
Falls Creek Water Co.,	Nov. 12, 1894,	Falls Creek Village, Clearfield County,	Affidavit of dissolution,	
Falls Creek Water Co.,	Jan. 28, 1902,	Falls Creek Borough, Jefferson County,	Never operated,	
Fallston Water Co.,	Mar. 31, 1902,	Fallston Borough, Beaver County,	Active,	1256
Farmers Water Co.,	May 20, 1904,	Mifflin Township, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Fayette City Water Co.,	Nov. 15, 1897,	Fayette City Borough, Fayette County,	Affidavit of dissolution,	
Fayette City Water Co.,	Nov. 18, 1903,	Fayette City Borough, Fayette County,	Merged into Fayette City Water Co.,	1180
Fayette City Water Co.,	May 30, 1906,	Merger, Fayette County,	Active,	1180
Fayetteville Water Co.,	Nov. 4, 1897,	Fayetteville, Franklin County,	Active,	844
Fayette Water Co. (The),	Oct. 26, 1896,	Lower Tyrone Township, Fayette County,	Dissolved,	
Federal Water Co.,	Nov. 26, 1900,	South Fayette Township, Allegheny County,	Active,	1161
Fell Water Co. (The),	Mar. 12, 1891,	Fell Township, Lackawanna County,	Owned by Consolidated Water Supply Co.	420
Fern Bank Water Co.,	Feb. 5, 1908,	Cresson Borough, Cambria County,	Not in operation,	
Fernbrook Water Co.,	Nov. 18, 1903,	Carbondale City, Lackawanna County,	Subsidiary of Belmont Water Co.,	438
Findley Run Water Supply Co.,	April 14, 1905,	East Wheatfield Township, Indiana County,	Active,	1051
Finleyville Water Co.,	Mar. 9, 1903,	Finleyville Borough, Washington County,	Affidavit of dissolution,	
Flat Rock Water Co.,	Aug. 27, 1901,	Adams Township, Cambria County,	Dissolved,	
Fleetwood Water Co.,	Sept. 5, 1889,	Fleetwood Borough, Berks County,	Sold to municipality,	204
Fleming Park Water Co.,	July 18, 1901,	Fleming Park and Stowe Township, Allegheny County	Sold to Benwood Water Co.,	1286
Flemington Water Co.,	June 9, 1913,	Flemington Borough, Clinton County,	Active,	547
Flint Hill Water Co.,	Dec. 15, 1879,	Bowers Station, Berks County,	Active,	195
Florence Water Co.,	April 1, 1901,	New Florence Borough, Westmoreland County	Affidavit of dissolution,	
Florida Water Co.,	Oct. 14, 1904,	Glenfield Borough, Allegheny County,	Dissolved,	
Florin Water Co.,	Sept. 12, 1911,	Mt. Joy Township, Lancaster County,	Merged into Florin Water Co.,	763
Florin Water Co.,	Dec. --, 1914,	Mt. Joy and East Donegal Townships, Lancaster County	Active,	763
Forestville Water Co. (The),	Dec. 17, 1890,	Cass Township, Schuylkill County,	Affidavit of dissolution,	
Forest Water Co.,	Aug. 27, 1901,	Croyle Township, Cambria County,	Leased by Cambria County Water Supply Co.	505
Forest Water Co. of Young Township,	April 24, 1903,	Young Township, Indiana County,	Affidavit of dissolution,	
Forty Fort Water Co. (The),	June 1, 1891,	Forty Fort Borough, Luzerne County,	Active,	443

Forward Township Water Co.,	Aug. 6, 1902,	Forward Township, Allegheny County,	Affidavit of dissolution,	
Forward Water Co.,	Mar. 18, 1905,	Jenner Township, Somerset County,	Never operated,	
Foxburg Water Works Co.,	June 29, 1878,	Foxburg Village, Clarion County,	Active,	907
Frackville Water Co.,	July 22, 1901,	Frackville, Schuylkill County,	Affidavit of dissolution,	
Frailey Water Co.,	April 14, 1905,	Frailey Township, Schuylkill County,	Not in operation,	232
Franklin Extended Water Co.,	Feb. 28, 1902,	Franklin Extended, Cambria County,	Affidavit of dissolution,	
Franklin Township Water Co.,	April 22, 1903,	Franklin Township, Fayette County,	Active,	1220
Franklin Water Co. (The),	Aug. 4, 1891,	East Franklin Township, Armstrong County	Active,	965
Frankstown Township Water Co.,	Jan. 4, 1905,	Frankstown Township, Blair County,	Never operated,	
Fredericksburg Water Co.,	Nov. 26, 1886,	Fredericksburg, Lebanon County,	Active,	764
Fredericktown Water Co.,	Sept. 1, 1903,	East Bethlehem Township, Washington County	Active,	1180
Freeburg Water Co.,	Feb. 9, 1905,	Washington Township, Snyder County,	Has done no work,	
Freeland Water Co. (The),	July 20, 1883,	Freeland Borough, Luzerne County,	Active,	392
Freemansburg Water Co.,	July 1, 1901,	Freemansburg Borough, Northampton County	Affidavit of dissolution,	
Freeport Water Works Co.,	Jan. 12, 1883,	Freeport Borough, Armstrong County,	Active,	1058
Furnace Water Co.,	Sept. 18, 1907,	Burrell Township, Indiana County,	Active,	1073
Galeton-Eldred Water Co.,	Nov. 1, 1894,	Galeton, Potter County,	Active,	548
Galeton Water Co. (The),	Jan. 3, 1899,	Galeton Borough, Potter County,	Affidavit of dissolution,	
Gallatin Water Co.,	Nov. 11, 1901,	N. Versailles Township, Allegheny County,	Merged into Trafford Water Co.,	1223
Gallitzin Water Co.,	Aug. 20, 1888,	Gallitzin Borough, Cambria County,	Leased by Cambria County Water Supply Co.	504
Garfield Water Co.,	Dec. 19, 1900,	West Wheatfield Township, Indiana County,	Active,	1044
Garrett Water Co.,	Aug. 5, 1903,	Garrett Borough, Somerset County,	Active,	1181
General Water Co.,	May 30, 1906,	Redstone Township, Fayette County,	Active,	1216
Genesee Citizens Water Co.,	June 28, 1906,	Genesee Township, Potter County,	Active,	865
Georges Water Co.,	Dec. 5, 1904,	Georges Township, Fayette County,	Affidavit of dissolution,	
Germania Water Co.,	May 20, 1904,	Mt. Oliver Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
German Township Water Co.,	Dec. 5, 1904,	German Township, Fayette County,	Affidavit of dissolution,	
Germantown Water Co.,	Mar. 29, 1851,	Germantown, Philadelphia County,	Sold to City of Philadelpiha,	
Gettysburg Water Co.,	April 29, 1823,	Gettysburg, Adams County,	Active,	845
Gilberton-Schuylkill Water Co.,	Oct. 21, 1909,	Gilberton Borough, Schuylkill County,	Not in operation,	
Gilberton Water Co. of Schuylkill Co. (The),	May 19, 1885,	Gilberton Borough, Schuylkill County,	Not in operation,	
Girardville Water Co.,	Oct. 21, 1909,	Girardville Borough, Schuylkill County,	Not in operation,	
Girard Water Co.,	May 18, 1894,	Girard Borough, Erie County,	Dissolved,	
Girard Water Co.,	Aug. 29, 1883,	West Mahanoy Township, Schuylkill County	Active,	393
Gladehurst Water Co.,	Jan. 4, 1906,	Somerset Township, Somerset County,	Active,	1182
Glenbrook Water Co.,	Mar. 16, 1904,	Conyngham Township, Luzerne County,	Never operated,	
Glen Cairn Water Co.,	Feb. 6, 1901,	Allegheny Township, Westmoreland County,	Affidavit of dissolution,	
Glendower Water Co.,	1905,	Foster Township, Schuylkill County,	Not in operation,	232

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Name	Date of incorporation	Territory covered by charter	Present status	Page
Glenfield Water Co. (The),	Aug. 20, 1897,	Glenfield Borough, Allegheny County,	Has done no work,	
Glenside Water Co. (The),	July 7, 1898,	Glenside, Edge Hill and Weldon Villages, Montgomery County	Sold to N. Springfield Water Co.,	257
Glenside Water Co.,	Nov. 11, 1902,	Spring Township, Berks County,	Active,	205
Glen Water Co. (The),	Jan. 23, 1899,	Glen Campbell Borough, Indiana County,	Active,	506
Glen Water Co.,	Feb. 5, 1901,	Glenfield Borough, Allegheny County,	Dissolved,	
Glen Water Supply Co.,	Jan. 4, 1905,	Logan Township, Blair County,	Merged into Blair Gap Water Supply Co.,	680
Glenwood Water Co.,	Jan. 24, 1890,	Mayville Borough, Lackawanna County,	Has done no work,	
Good Spring Water Co. (The),	Oct. 25, 1893,	Porter Township, Schuylkill County,	Not in operation,	231
Goodwin Water Co.,	July 20, 1904,	Upper St. Clair Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Grampian Water Co.,	Aug. 6, 1902,	Grampian Borough, Clearfield County,	Never operated,	
Granite Water Co. (The),	July 12, 1892,	Big Mine Run Village, Schuylkill County,	Affidavit of dissolution,	
Grant Township Water Co.,	Feb. 10, 1903,	Grant Township, Indiana County,	Has done no work,	
Grant Water Co.,	Nov. 11, 1901,	East Pittsburgh Borough, Allegheny County	Merged into Trafford Water Co.,	1223
Granville Water Co.,	Oct. 22, 1900,	Granville Township, Mifflin County,	Merged into Lewistown-Reedsville Water Co.	701
Gravel Hill Water Co.,	Sept. 17, 1909,	N. Londonderry Township, Lebanon County	Sold to Lebanon Valley Consolidated Water Supply Co.	782
Gravel Run Water Co. (The),	Dec. 8, 1892,	Hazle Township, Luzerne County,	Has done no work,	
Gravity Water Co.,	June 28, 1912,	Addison Township, Somerset County,	Active,	1196
Great Bend Water Co.,	April 14, 1892,	Great Bend Borough, Susquehanna County,	Active,	317
Greenburr Water Co.,	May 16, 1889,	Greenburr Village, Clinton County,	Active,	550
Greencastle Water Co.,	Nov. 15, 1893,	Greencastle, Franklin County,	Sold to municipality,	846
Green Hill Water Co.,	Nov. 1, 1910,	Logan Township, Blair County,	Active,	663
Greenfield Water Supply Co.,	Jan. 4, 1905,	Allegheny Township, Blair County,	Merged into Blair Gap Water Supply Co.,	680
Greenmount Water Supply Co.,	Mar. 11, 1905,	Henderson Township, Huntingdon County,	Never operated,	808
Greensburg Water Co.,	April 1, 1858,	Greensburg, Westmoreland County,	Not in operation,	
Greensburg Water Co.,	June 2, 1884,	Greensburg Borough, Westmoreland County,	Never operated,	
Green Township Water Co.,	Feb. 10, 1903,	Green Township, Indiana County,	Has done no work,	
Green Tree Water Co.,	May 20, 1904,	Green Tree Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Greenville Gas and Water Co.,	Mar. 15, 1872,	Greenville, Mercer County,	Never operated,	
Greenville Water Co. (The),	Nov. 17, 1885,	Greenville Borough, Mercer County,	Active,	1273

Griffin Water Supply Co.,	Oct. 30, 1901,	Nicholson Township, Fayette County,	Affidavit of dissolution,	
Grill Water Co.,	May 16, 1904,	Grill Village, Berks County,	Active,	206
Grove City Water Co. (The),	Aug. 14, 1895,	Grove City Borough, Mercer County,	Never operated,	
Groveton Water Co.,	June 24, 1903,	Robinson Township, Allegheny County,	Affidavit of dissolution,	
Gwendolen Water Co.,	Dec. 9, 1903,	Cambria Township, Cambria County,	Sold to Summit Water Supply Co.,	1078
Halifax Water Co.,	Aug. 3, 1897,	Halifax Borough, Dauphin County,	Active,	621
Hallstead Water Co.,	April 14, 1892,	Hallstead Borough, Susquehanna County,	Active,	317
Hamburg Water Co. (The),	July 2, 1885,	Hamburg, Berks County,	Never operated,	
Hamilton Water Co.,	Nov. 15, 1904,	Hamilton Township, Monroe County,	Active,	147
Hanover Crane Water Co.,	June 25, 1901,	Hanover Township, Lehigh County,	Merged into Clear Springs Water Co.,	116
Hanover and McSherrytown Water Co.,	Oct. 16, 1895,	Hanover Borough, York County,	Active,	767
Hanover Water Co.,	April 25, 1872,	Hanover Borough, York County,	Sold to Hanover and McSherrystown Water Co.	768
Hanover Water Co.,	Dec. ..., 1914,	Hanover Township, Lehigh County,	Merged into Bethlehem Water Co.,	152
Hanover Water Co. (The),	Oct. 5, 1885,	Hanover Township, Luzerne County,	Active,	443
Hares Valley Water Co.,	Feb. 4, 1905,	Union Township, Huntingdon County,	Not operating,	
Harmar Township Water Co.,	April 17, 1906,	Harmar Township, Allegheny County,	Sold to Allegheny Valley Water Co.,	1114
Harmar Water Co. (The),	Nov. 28, 1898,	Harmar Township, Allegheny County,	Dissolved,	
Harmony Water Co.,	May 23, 1902,	Harmony Township, Beaver County,	Sold to municipality,	1250
Harrisburg (Borough) Water Co.,	Mar. 10, 1825,	Harrisburg, Dauphin County,	Sold to city,	
Harrisburg Canal, Insurance and Water Co.,	Mar. 27, 1823,	Harrisburg, Dauphin County,	Not in operation,	770
Harrisburg Water Co.,	Feb. 11, 1823,	Harrisburg, Dauphin County,	Sold to city,	8
Harrison Township Water Co.,	Sept. 23, 1887,	Harrison Township, Allegheny County,	Merged into Tarentum Water Co.,	1114
Hartley Township Water Co. of Hartley Township, Union County, Pa.	May 7, 1901,	Hartley Township, Union County,	Sold to Shamokin Dam Water Co.,	1357
Hartley Water Co. of Hartley Township, Union County, Pa.	May 7, 1901,	Hartley Township, Union County,	Sold to Shamokin Dam Water Co.,	1357
Harveys Lake Water Supply Co.,	Feb. 11, 1896,	Wyoming Valley, Luzerne County,	Active,	443
Harwood Water Co.,	Jan. 17, 1905,	Sharaden Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	
Hastings Water Co. (The),	Dec. 3, 1891,	Hastings Borough, Cambria County,	Active,	507
Hatboro Water Co.,	Feb. 15, 1897,	Hatboro Borough, Montgomery County,	Active,	209
Haverford Water Co.,	Jan. 4, 1886,	Haverford Township, Delaware County,	Affidavit of dissolution,	
Haverford Water Co. (The),	Nov. 4, 1886,	Haverford, Delaware County,	Affidavit of dissolution,	
Hawley Water Co.,	Dec. 24, 1888,	Hawley Borough, Wayne County,	Active,	73
Haysville Water Co.,	Jan. 28, 1898,	Osborne Borough and Aleppo Township, Allegheny County	Active,	1276
Hays Water Co.,	May 20, 1904,	Hays Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Hazlehurst Water Co.,	Sept. 12, 1898,	Hazlehurst Village, McKean County,	Active,	911
Hazle Township Water Co.,	April 28, 1910,	Hazle Township, Luzerne County,	Active,	396

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Name	Date of incorporation	Territory covered by charter	Present status	Page
Hazleton Water Co.,	Jan. 8, 1895,	Hazleton City, Luzerne County,	Active,	399
Hazle Water Co.,	Dec. 20, 1892,	Lehigh Township, Carbon County,	Dissolved,	
Hebron Water Co.,	Feb. 25, 1903,	South Lebanon Township, Lebanon County,	Merged into Weaverstown Water Co.,	782
Hegins Water Co.,	Nov. 30, 1909,	Hegins Township, Schuylkill County,	Active,	622
Heidelberg Township Water Co.,	Feb. 2, 1910,	Heidelberg Township, Lebanon County,	Active,	818
Heidelberg Water Co.,	Oct. 19, 1904,	Heidelberg Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Heights Water Co.,	Dec. 22, 1902,	South Lebanon Township, Lebanon County,	Active,	782
Hellam Water Co.,	Oct. 11, 1906,	Hellam Township, York County,	Active,	766
Hemlock Water Co.,	Mar. 25, 1905,	Washington Township, Cambria County,	Affidavit of dissolution,	
Hempfield Township Water Co.,	June 2, 1884,	Hempfield Township, Westmoreland County,	Sold to Greensburg Water Co.,	
Henrietta Water Co.,	May 12, 1902,	Barr Township, Cambria County,	Leased by Cambria County Water Supply Co.	505
Herndon Water Co.,	Mar. 30, 1906,	Herndon Borough, Northumberland County,	Active,	622
Hershey Water Co.,	May 13, 1913,	Part Derry Township, Dauphin County,	Active,	772
Hibbs Water Co.,	Feb. 21, 1905,	Menallen Township, Fayette County,	Active,	1194
Highland Spring Water Co.,	Jan. 3, 1889,	Abington Township, Montgomery County,	Not in operation,	
Highland Water Co.,	April 23, 1903,	Grant Township, Indiana County,	Charter held by Cambria County Water Supply Co.	505
Highland Water Co.,	May 20, 1904,	Crafton Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Highland Water Co. of Ridley Township (The)	Mar. 7, 1892,	Ridley Township, Delaware County,	Sold to Springfield Water Co.,	258
Highland Water Co. of West Newton, Pa. (The)	Jan. 6, 1893,	West Newton Borough, Westmoreland County	Has done no work,	
High Ridge Water Supply Co.,	Mar. 11, 1905,	St. Clair Township, Westmoreland County,	Active,	1089
Highspire Water Co.,	Nov. 14, 1901,	Highspire Village, Dauphin County,	Sold to Paxtang Cons. W. Co.,	773
Hillside Springs Water Co.,	April 27, 1905,	Nescopeck Borough, Luzerne County,	Affidavit of dissolution,	
Hillside Water Supply Co.,	Sept. 12, 1911,	Upper Turkeyfoot Township, Somerset County	Active,	1196
Hill Top Water Co.,	Mar. 5, 1903,	Madison Township, Clarion County,	Never operated,	
Hill Top Water Supply Co.,	May 20, 1904,	Knoxville Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Hiltown Water Co.,	May 2, 1911,	Hiltown Township, Bucks County,	Merged into Telford Water Co.,	288
Hollidaysburg Gas and Water Co.,	Mar. 16, 1854,	Hollidaysburg, Blair County,	Never operated as water company,	
Hollidaysburg Water Co.,	Mar. 12, 1841,	Hollidaysburg, Blair County,	Has done no work,	
Hollidaysburg Water Co. (The),	Mar. 16, 1865,	Hollidaysburg, Blair County,	Has done no work,	
Holmesburg Water Co.,	July 19, 1887,	Oxford and Lower Dublin Townships, Philadelphia County	Active,	253

Homestead Borough Water Co.,	Oct. 15, 1903,	Homestead Borough, Allegheny County,	Affidavit of dissolution,	
Homestead Water Co.,	Sept. 10, 1888,	Homestead Borough, Allegheny County,	Has done no work,	
Homestead Water Co.,	April 23, 1889,	Homestead Borough, Allegheny County,	Affidavit of dissolution,	
Homestead Water Co. (The),	Aug. 27, 1883,	Homestead Borough, Allegheny County,	Not in operation,	
Home Water Co. of Royersford,	July 12, 1887,	Spring City Borough, Chester County,	Active,	276
Home Water Co. of South Philipsburg, Centre County, Pa.	June 27, 1901,	South Philipsburg, Centre County,	Active,	516
Home Water Co.,	July 12, 1887,	Royersford Borough, Montgomery County,	Active,	276
Home Water Supply Co.,	Mar. 25, 1905,	Logan Township, Blair County,	Active,	670
Honesdale Consolidated Water Co.,	Feb. 16, 1905,	Merger, Pike and Wayne Counties,	Active,	74
Honesdale Water Co. (The),	Mar. 14, 1850,	Honesdale, Wayne County,	Merged into Honesdale Cons. Water Co.,	74
Honey Brook Water Co. (The),	Jan. 17, 1891,	Audenried, Carbon County,	Active,	406
Hooversville Water Co.,	Jan. 12, 1912,	Hooversville Borough, Somerset County,	Active,	1063
Hop Bottom Water Co.,	Sept. 12, 1911,	Hop Bottom Borough, Susquehanna County,	Active,	319
Hopewell Township Water Co.,	Dec. 3, 1907,	Hopewell Township, Beaver County,	Active,	1294
Hopewell Water Co.,	Aug. 12, 1901,	Hopewell Township, Beaver County,	Never operated,	
Horton Water Co.,	April 13, 1903,	Horton Township, Elk County,	Never operated,	
Houston Water Co.,	July 22, 1912,	Houston Borough, Washington County,	Not in operation,	
Houtzdale Water Co.,	1887,	Houtzdale, Clearfield County,	Active,	508
Hughestown Borough Water Co.,	July 16, 1901,	Hughestown Borough, Luzerne County,	Active,	443
Hughesville Home Water Co.,	Dec. 27, 1904,	Hughesville Borough, Lycoming County,	Active,	581
Hughesville Water Co.,	June 8, 1888,	Hughesville Borough, Lycoming County,	Sold to Hughesville Home Water Co.,	
Hummelstown Consolidated Water Co.,	Sept. 26, 1887,	Hummelstown Borough, Dauphin County,	Controlled by Paxtang Consolidated Water Co.	775
Hunter Run Water Co.,	Aug. 27, 1900,	Lehigh Township, Carbon County,	Active,	146
Huntingdon Water Co. (The),	Sept. 6, 1884,	Huntingdon Borough, Huntingdon County,	Affidavit of dissolution,	
Huntingdon Water Supply Co.,	Oct. 4, 1900,	Huntingdon Borough, Huntingdon County,	Active,	675
Huron Water Co.,	Sept. 5, 1899,	German Township, Fayette County,	Merged into Youghgahela Water Co.,	1166
Hyde Park Gas and Water Co.,	April 11, 1863,	Hyde Park, Luzerne County,	Not in operation,	
Hyde Park Water Co.,	July 20, 1900,	Hyde Park Borough, Westmoreland County,	Not in operation,	
Hyndman Water Co. (The),	Aug. 17, 1891,	Hyndman Borough, Bedford County,	Active,	847
Idaho Water Co.,	July 22, 1964,	Bellevue Borough, Allegheny County,	Sold to Ohio Valley Water Co.,	1286
Idlewood Water Co.,	July 10, 1895,	Chartiers Township, Allegheny County,	Affidavit of dissolution,	
Idlewood Water Co.,	Jan. 17, 1905,	Chartiers Township, Allegheny County,	Sold to S. Pittsburgh Water Co.,	
Imperial Water Co.,	May 11, 1904,	Carnegie Borough, Allegheny County,	Affidavit of dissolution,	
Indiana Water Co. (The),	Oct. 8, 1883,	Indiana Borough, Indiana County,	Has done no work,	
Industrial Water Supply Co.,	Feb. 1, 1905,	Adams Township, Cambria County,	Sold to Mountain Springs Water Co., now Summit Water Supply Co.	1090
Ingleside Water Co.,	Dec. 23, 1892,	Allegheny Township, Westmoreland County,	Affidavit of dissolution,	
Ingram Water Co.,	May 11, 1904,	Ingram Borough, Allegheny County,	Affidavit of dissolution,	
Interurban Water Co.,	Oct. 15, 1903,	Mifflin Township, Allegheny County,	Affidavit of dissolution,	
Iron City Water Co.,	June 17, 1889,	Pittsburgh City, Allegheny County,	Has done no work,	

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Name	Date of incorporation	Territory covered by charter	Present status	Page
Iroquois Water Supply Co.,	Mar. 11, 1905,	Miller Township, Perry County,	Sold to Nekoda Water Supply Co.,	809
Irwin Water Co. (The),	Nov. 3, 1883,	Irwin Borough, Westmoreland County,	Affidavit of dissolution,	
Irwin Water Co.,	Feb. 14, 1889,	Irwin Borough, Westmoreland County,	Sold to Westmoreland Water Co.,	1186
Ivy View Water Co.,	Oct. 9, 1903,	Cresson Township, Cambria County,	Active,	1052
Jacks Mountain Water Co.,	Feb. 24, 1905,	Mapleton Borough, Huntingdon County,	Active,	702
Jackson Water Co.,	Dec. 28, 1900,	Jackson Township, Cambria County,	Active,	1120
Jamestown Water Co.,	Jan. 9, 1914,	Jamestown Borough, Mercer County,	Active	1277
Jefferson and Mifflin Water Co.,	Dec. 10, 1896,	Allegheny [illegible]	Sold to Monongahela Valley Water Co.	1185
Jefferson Water Co.,	April 23, 1852,	Honesdale, Wayne County,	Not in operation,	
Jenkins Township Water Co.,	July 16, 1901,	Jenkins Township, Luzerne County,	Active,	443
Jenkintown Water Co.,	Jan. 7, 1889,	Jenkintown, Montgomery County,	Active,	212
Jenner Water Co.,	Oct. 15, 1901,	Jenner Township, Somerset County,	Active,	1044
Jermyn and Rush Brook Water Co.,	Oct. 16, 1894,	Merger, Lackawanna County,	Owned by Consolidated Water Supply Co.	420
Jermyn Water Co. (The),	June 5, 1884,	Jermyn Borough, Lackawanna County,	Merged into Jermyn and Rush Brook Water Co.	
Jersey Shore Water Co. (The),	Mar. 18, 1884,	Jersey Shore Borough, Lycoming County,	Active,	582
Jessop Water Co.,	June 24, 1901,	Canton Township, Washington County,	Leased by Citizens Water Co. of Washington	1308
Johnsonburg Water Co.,	Aug. 13, 1890,	Ridgway Township, Elk County,	Active,	987
Johnstown Water and Gas Co.,	April 15, 1856,	Johnstown, Cambria County,	Sold to Consumers Gas Co. Not in operation	
Johnstown Water Co.,	April 11, 1866,	Johnstown, Conemaugh, Millvale, Prospect and Cambria Boroughs, Cambria County	Active,	1066
Jonestown Water Supply Co.,	April 26, 1910,	Jonestown Borough, Lebanon County,	Sold to Lebanon Valley Cons. Water Co	782
Josephine Water Co.,	May 30, 1906,	Burrell Township, Blair County,	Active,	1073
Juniata Water Co.,	Jan. 4, 1894,	Juniata Borough, Blair County,	Has done no work,	
Justin Water Co. of Weatherly, Pa.,	Dec. 21, 1904,	Weatherly Borough, Carbon County,	Affidavit of dissolution,	
Kalorama Water Co.,	June 24, 1901,	N. Franklin Township, Washington County,	Leased by Citizens Water Co. of Washington, Pa.	1308
Kane Gas and Water Co.,	Mar. 21, 1865,	Kane, McKean County,	Never operated,	
Katharine Water Co.,	May 18, 1904,	Susquehanna Township, Cambria County,	Has done no work,	
Kelly Water Co.,	Oct. 19, 1900,	Kelly Township, Union County,	Owned by White Deer Mountain Water Co.	587
Kensington Water Co.,	July 7, 1890,	Lower Burrell Township, Westmoreland County	Active,	1086
Kersey Water Co.,	April 13, 1903,	Jay Township, Elk County,	Never operated,	
Keystone Gas and Water Co. of Titusville,	Mar. 28, 1870,	Titusville, Crawford County,	Never operated,	

Keystone Water Co.,	Oct. 15, 1888,	Plains Township, Luzerne County,	[illegible] of dissolution,	
Keystone Water Co. (The),	July 11, 1890,	LaPlume Borough, Lackawanna County,	[illegible]avit of dissolution,	
Keystone Water Co. (The),	Feb. 29, 1892,	Harrisburg City, Dauphin County,	Affidavit of dissolution,	
Keystone Water Co. of Milton, Pa.,	Sept. 28, 1900,	Milton, Northumberland County,	Affidavit of dissolution,	
Keystone Water Improvement Co.,	Jan. 6, 1896,	Philadelphia City,	Has done no work,	
Kingston Water Co.,	May 5, 1841,	Kingston, Luzerne County,	Has done no work,	
Kingston Water Co. (The),	May 16, 1883,	Kingston Borough, Luzerne County,	Not in operation,	
Kingston Water Co.,	Mar. 8, 1915,	Edwardsville Borough, Luzerne County,	Active,	443
Ketner Water Co.,	Dec. 9, 1912,	Jones Township, Elk County,	Active,	970
Kittanning Water Co.,	Mar. 12, 1868,	Kittanning, Armstrong County,	Sold to Armstrong Water Co.,	900
Knoxville Water Co. (The),	Dec. 7, 1885,	Scranton City, Lackawanna County,	Not in operation,	
Knoxville Water Co.,	June 27, 1892,	Knoxville Borough, Allegheny County,	Sold to St. Clair Water Co.,	1164
Koppel Water Co.,	Dec. 29, 1910,	Koppel Village, Beaver County,	Active,	1278
Kulpmont Water Co.,	Nov. 1, 1910,	Kulpmont Village, Northumberland County,	Active,	403
Kutztown Water Co.,	June 27, 1889,	Kutztown Borough, Berks County,	Active,	211
Kyle Water Co.,	Dec. 9, 1912,	Washington Township, Jefferson County,	Active,	971
Lackawanna Valley Water Supply Co.,	Oct. 1, 1897,	Lackawanna and Susquehanna Counties,	Owned by Consolidated Water Supply Co.	420
Lackawanna Water Supply Co. (The),	Aug. 29, 1893,	Dickson City Borough, Lackawanna County	Affidavit of dissolution,	
Lackawaxen Water Power Co.,	May 21, 1901,	Lackawaxen Township, Pike County,	Affidavit of dissolution,	
Lafayette Water Co.,	May 20, 1904,	Chartiers Township, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Laflin Water Co.,	April 29, 1889,	Laflin Borough, Luzerne County,	Active,	443
Lamar Water Supply Co.,	Feb. 28, 1913,	Lamar Township, Clinton County,	Controlled by West End Water Co.,	547
Lancaster Borough Water Co.,	Mar. 21, 1836,	Lancaster, Lancaster County,	Sold to municipality,	777
Lancaster City Water Co.,	Mar. 18, 1822,	Lancaster, Lancaster County,	Not operating,	
Lancaster Water Co.,	April 23, 1829,	Lancaster, Lancaster County,	Not operating,	
Lanesboro Water Co.,	June 26, 1899,	Lanesboro Borough, Susquehanna County,	Active,	
Langhorne Spring Water Co. (The),	April 20, 1886,	Laughorne Borough, Bucks County,	Active,	126
Lansdale Water Co.,	Aug. 31, 1882,	Lansdale Borough, Montgomery County,	Active,	127
Lansdown Park Water Co.,	Nov. 18, 1913,	Lansdown Park, South Abington Township, Lackawanna County	Active,	404
Lansdowne Water Co. (The),	July 11, 1896,	Upper Darby Township, Delaware County,	Sold to Springfield Water Co.,	257
Laporte Gas and Water Co.,	April 13, 1859,	Laporte, Sullivan County,	Not in operation,	
Latrobe Water Co. (The),	Nov. 13, 1883,	Latrobe Borough, Westmoreland County,	Active,	1075
Laurel Hill Water Supply Co.,	Sept. 4, 1902,	Upper Turkeyfoot Township, Somerset County	Merged into Western Water Supply Co.,	
Laurel Run Water Co. (The),	Oct. 20, 1884,	Laurel Run, Luzerne County,	Active,	405
Laurel Springs Water Co.,	June 1, 1888,	Tredyffrin, Easttown and Willistown Townships, Chester County	Not in operation,	
Laurelton Water Co.,	Aug. 23, 1897,	Laurelton Village, Union County,	Affidavit of dissolution,	
Lawrence Water Co.,	June 2, 1902,	Lawrence Township, Clearfield County,	Sold to Clearfield Water Co.,	495
Lebanon Valley Consolidated Water Supply Co.,	Aug. 11, 1903,	Merger, Lebanon County,	Active,	781
Lebanon Water Co.,	Jan. 26, 1888,	North Lebanon Township, Lebanon County,	Active,	783

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
Lebanon Water Co.,	Jan. 5, 1893,	Mansfield Borough, Allegheny County,	Sold to St. Clair Water Co.,	1164
Leechburg Water Co. (The),	Dec. 18, 1882,	Leechburg Borough, Armstrong County,	Not in operation,	
Leechburg Water Works Co.,	Dec. 20, 1887,	Leechburg, Armstrong County,	Active,	1035
Lehigh Acme Water Co.,	Nov. 24, 1902,	Lehigh Township, Northampton County,	Not in operation,	
Lehigh Coplay Water Co.,	June 26, 1901,	Coplay Borough, Lehigh County,	Affidavit of dissolution,	
Lehighton Water Co.,	Aug. 6, 1888,	Lehighton Borough, Carbon County,	Active,	133
Lehighton Water Supply Co.,	Nov. 8, 1899,	Carbon County,	Active,	132
Lehigh Valley Water Supply Co.,	July 24, 1899,	Lehigh, Northampton and Monroe Counties,	Not in operation,	
Lehigh Water Co.,	May 4, 1854,	Easton, Northampton County,	Active,	68
Lehman Water Co.,	Nov. 6, 1911,	Lehman Township, Pike County,	Never operated,	
Lemont Water Co.,	Feb. 16, 1905,	North Union Township, Fayette County,	Merged into Youghgahela Water Co.,	1166
Lenape Water Supply Co.,	April 14, 1902,	Coolbaugh Township, Monroe County,	Dissolved,	
Lenni Heights Water Co.,	Aug. 30, 1911,	Middletown Township, Delaware County,	Never operated,	
Lewisburg Water Co. (The),	May 30, 1883,	Lewisburg Borough, Union County,	Owned by White Deer Mountain Water Co.	587
Lewistown-Reedsville Water Co.,	June 3, 1908,	Merger, Mifflin County,	Active,	701
Lewistown Water Co.,	April 16, 1838,	Lewistown, Mifflin County,	Merged into Lewistown-Reedsville Water Co.	701
Lewisville Water Co.,	Sept. 30, 1887,	Lewisville, Potter County,	Active,	866
Ligonier Township Water Co.,	May 30, 1903,	Ligonier Township, Westmoreland County,	Dissolved,	
Lilly Water Co. (The),	Nov. 6, 1893,	Lilly Borough, Cambria County,	Dissolved,	
Lincoln Water Co.,	Dec. 10, 1896,	Allegheny County,	Sold to Monongahela Valley Water Co.,	1185
Lindsey Water Co. (The),	Feb. 27, 1898,	Clayville Borough, Jefferson County,	Active,	985
Linwood Water Co.,	Dec. 2, 1895,	Lower Chichester Township, Delaware County	Sold to New Chester Water Co.,	199
Lititz Water Co.,	May 26, 1887,	Lititz, Lancaster County,	Sold to municipality,	784
Little Mahoning Water Co.,	Feb. 16, 1903,	Canoe Township, Indiana County,	Has done no work,	
Liverpool Water Co. (The),	Sept. 18, 1894,	Liverpool Borough, Perry County,	Never operated,	
Lock Haven Gas and Water Co.,	Feb. 11, 1854,	Lock Haven, Clinton County,	Not in operation as water company,	
Lock Haven Water Co.,	April 15, 1863,	Lock Haven, Clinton County,	Never operated,	
Locust Mountain Water Co.,	Oct. 24, 1881,	Conyngham Township, Columbia County,	Leased to Wyoming Valley Water Supply Co.	379
Logan Spring Water Co.,	Dec. 1, 1899,	Brown Township, Mifflin County,	Sold to Reedsville Water Co.,	701
Logans Valley Water Co.,	Nov. 7, 1900,	Antis Township, Blair County,	Has done no work,	

Logansville Water Co.,	Feb. 1, 1860,	Loganville, York County,	Dissolved,	
Logan Township Water Co.,	Jan. 10, 1905,	Logan Township, Huntingdon County,	Never operated,	
Logan Water Co.,	Dec. 9, 1889,	Logan Township, Blair County,	Has done no work,	
Logstown Water Co.,	Nov. 25, 1901,	Aliquippa Borough, Beaver County,	Affidavit of dissolution,	
Londonderry Water Co. (The),	Mar. 22, 1883,	Palmyra, Lebanon County,	Lapsed,	805
Londonderry Water Co. (reincorporated),	Dec. 2, 1911,	Palmyra, Lebanon County,	Active,	805
Londonderry Water Co.,	April 9, 1902,	Royalton Borough, Dauphin County,	Merged into Middletown and Swatara Consolidated Water Co.	791
Longfellow Water Supply Co.,	Mar. 11, 1905,	Bratton Township, Mifflin County,	Sold to Greenmount Water Supply Co.,	809
Louden Water Co.,	April 24, 1857,	Louden, Franklin County,	Not in operation,	
Loudentown Water Co.,	Mar. 31, 1821,	Loudentown, Franklin County,	Not in operation,	
Lower Gwynedd Water Co.,	May 2, 1911,	Lower Gwynedd Township, Montgomery County	Active,	236
Lower Merion Water Co.,	June 4, 1886,	Lower Merion Township, Montgomery County	Affidavit of dissolution,	
Lower Mount Bethel Water Co.,	Oct. 17, 1960,	Lower Mount Bethel Township, Northampton County	Not in operation,	
Lower Nazareth Water Co.,	June 9, 1992,	Lower Nazareth Township, Northampton County	Affidavit of dissolution,	
Lower Oxford Water Co.,	June 9, 1903,	Lower Oxford Township, Chester County,	Merged into Octoraro Water Co.,	809
Lower Saucon Township Water Co.,	Dec. --, 1914,	Lower Saucon Township, Northampton County	Merged into Bethlehem Water Co.,	
Lower St. Clair Water Co.,	May 20, 1904,	Lower St. Clair Township, Allegheny County	Sold to S. Pittsburgh Water Co.,	1164
Loyalhanna Water Co.,	Oct. 20, 1887,	Loyalhanna Township, Westmoreland County	Never operated,	
Luckett Water Supply Co.,	Mar. 11, 1905,	Cresson Township, Cambria County,	Sold to Mountain Springs Water Co., now Summit Water Supply Co.	1090
Ludwick Water Co.,	June 2, 1884,	Ludwick Borough, Westmoreland County,	Sold to Greensburg Water Co.,	
Lumber City Water Co. (The),	Aug. 4, 1896,	Austin Borough, Potter County,	Ceased to exist by process of law,	488
Luzerne Water Co. (The),	Oct. 7, 1886,	Luzerne Borough, Luzerne County,	Not in operation,	
Luzerne Water Co.,	July 6, 1889,	Luzerne Borough, Luzerne County,	Active,	443
Lykens Water Co.,	May 19, 1871,	Lykens, Dauphin County,	Has done no work,	
Lykens Water Co. (The),	May 6, 1880,	Lykens Borough, Dauphin County,	Never operated,	
Lykens Water Co. (The),	July 20, 1883,	Lykens Borough, Dauphin County,	Active,	624
Lyons Water Co.,	June, 1866,	Maxatawny Township, Berks County,	Active,	215
Mace Springs Water Co. of Bolivar, Pa.,	Oct. 18, 1900,	Bolivar Borough, Westmoreland County,	Active,	1043
Madera Water Co.,	Oct. 18, 1904,	Madera Village, Clearfield County,	Active,	510
Madison Water Co.,	Nov. 11, 1901,	Turtle Creek Borough, Allegheny County,	Merged into Trafford Water Co.,	1223

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
Mahanoy City Water Co.,	Feb. 15, 1866,	Mahanoy City Borough, Mahanoy, Delano and East Union Townships, Schuylkill County	Active,	408
Mahanoy Valley Gas and Water Co.,	May 9, 1871,	Conyngham Township, Columbia County, Mt. Carmel Township, Northumberland County	Not in operation,	
Mahoningtown Water Co.,	Dec. 2, 1896,	Mahoningtown Borough, Lawrence County,	Merged into City of New Castle Water Co.	1293
Mahoning Water Co. (The),	Nov. 11, 1884,	Punxsutawney Borough, Jefferson County,	Affidavit of dissolution,	
Malvern Water Co.,	Nov. 7, 1889,	Malvern Borough, Chester County,	Sold to municipality,	217
Mammoth Springs Water Co.,	Sept. 1, 1909,	Muhlenberg Township, Berks County,	Active,	227
Manayunk and Roxborough Water Co.,	April 9, 1859,	Manayunk and Roxborough, Philadelphia County	Sold to city,	
Manchester Water Co. of Allegheny County (The)	April 12, 1864,	Manchester, Allegheny County,	Not in operation,	
Manheim Water Co. (The),	Oct. 7, 1884,	Manheim Borough, Lancaster County,	Active,	785
Manheim Township Water Co. (The),	April 1, 1912,	Part Manheim Township, Lancaster County,	Active,	779
Manor Township Water Co.,	June 3, 1901,	Manor Township, Armstrong County,	Sold to Armstrong Water Co.,	990
Manorville Water Co.,	June 3, 1901,	Manorville Borough, Armstrong County,	Sold to Armstrong Water Co.,	990
Manor Water Co.,	May 13, 1898,	Manor Township, Armstrong County,	Affidavit of dissolution,	
Mansfield Borough Water Co.,	Dec. 12, 1893,	Mansfield Borough, Allegheny County,	Sold to Monongahela Water Co.,	1093
Mansfield Valley Water Co.,	Jan. 5, 1887,	Mansfield Borough, Allegheny County,	Affidavit of dissolution,	
Mansfield Water Co.,	July 2, 1889,	Mansfield Borough, Allegheny County,	Not in operation,	
Mansfield Water Co. (The),	Sept. 14, 1891,	Mansfield Borough, Tioga County,	Active,	326
Manufacturers Water Co.,	June 13, 1889,	Patton Township, Allegheny County,	Merged into Pennsylvania Water Co.,	1125
Manufacturers Water Co.,	Feb. 19, 1900,	Cambria County,	Active,	1066
Manufacturers Water Co. of Bloomsburg, Pa. (The)	Dec. 9, 1892,	Bloomsburg, Columbia County,	Has done no work,	
Manufacturers Water Co. of Pittsburg (The),	July 9, 1886,	Pittsburgh City, Allegheny County,	Sold to Monongahela Water Co.,	1093
Manwalamink Water Co.,	Dec. 5, 1904,	Smithfield Township, Monroe County,	Active,	82
Maple Forest Water Supply Co.,	Sept. 28, 1900,	Middle Smithfield Township, Monroe County,	Affidavit of dissolution,	
Mapleton Water Co.,	Oct. 11, 1906,	Mapleton Borough, Huntingdon County,	Active,	702
Maple Water Co.,	Dec. 5, 1904,	Franklin Borough, Cambria County,	Merged into Conemaugh and Franklin Water Co.	1054

Marchand Water Co.,	June 9, 1903,	Marchand, Fayette County,	Has done no work,	
Marcus Hook Water Co.,	Feb. 9, 1892,	Marcus Hook Borough, Delaware County,	Has done no work,	
Marcy Township Water Co.,	July 16, 1901,	Marcy Township, Luzerne County,	Active,	443
Marianna Water Co.,	Dec. 31, 1908,	West Bethlehem Township, Washington County	Active,	1195
Marie Water Co.,	May 12, 1902,	Blacklick Township, Cambria County,	Active,	1115
Marietta Gravity Water Co. (The),	May 27, 1892,	Marietta Borough, Lancaster County,	Active,	786
Marietta Water Co. (The),	May 27, 1892,	Marietta Borough, Lancaster County,	Affidavit of dissolution,	
Marion Center Water Co. (The),	Dec. 2, 1911,	Marion Center Borough, Indiana County,	Active,	991
Marion Heights Water Co.,	May 3, 1907,	Marion Heights Borough, Northumberland County	Active,	407
Marjorie Water Co.,	May 12, 1902,	Susquehanna Township, Cambria County,	Merged into Northern Cambria Water Co.	520
Mar Lin Water Co. (The),	Nov. 19, 1912,	Norwegian Township, Schuylkill County,	Not in operation,	
Marple Water Co. of Delaware County,	Aug. 6, 1901,	Marple Township, Delaware County,	Affidavit of dissolution,	
Marsh Run Water Supply Co.,	Mar. 11, 1905,	Tuscarora Township, Perry County,	Sold to Nekoda Water Supply Co.,	809
Martindale Water Co.,	April 30, 1901,	Portage Borough, Cambria County,	Reorganized into Portage Water Co.,	1103
Martinsburg Water Co. (The),	Mar. 4, 1892,	Martinsburg Borough, Blair County,	Purchased by borough,	678
Martins Creek Water Supply Co.,	April 23, 1904,	Lower Mt. Bethel Township, Northampton County	Dissolved,	
Marysville Water Co. (The),	April 3, 1895,	Marysville Borough, Perry County,	Active,	788
Masontown Water Co.,	June 18, 1900,	Masontown Borough, Fayette County,	Affidavit of dissolution,	
Masontown Water Supply Co.,	July 12, 1906,	Masontown Borough, Fayette County,	Dissolved,	
Matamoras Citizens Water Co.,	June 17, 1903,	Westfall Township, Pike County,	Active,	75
Matamoras Water Co. (The),	May 24, 1898,	Matamoras Village, Pike County,	Affidavit of dissolution,	
Mauch Chunk Township Water Co.,	Oct. 23, 1900,	Mauch Chunk Township, Carbon County,	Sold to Panther Valley Water Co.,	130
Mauch Chunk Water Co.,	Mar. 6, 1849,	Mauch Chunk, Carbon County,	Active,	135
Mayfield Water Co. (The),	July 7, 1892,	Mayfield Borough, Lackawanna County,	Owned by Consolidated Water Supply Co.	420
McConnellsburg Water Co.,	June 8, 1900,	McConnellsburg Borough, Fulton County,	Active,	850
McKee Water Co. (The),	June 7, 1892,	Susquehanna Township, Dauphin County,	Sold to city of Hazleton,	
McKeesport Water Co. (The),	Mar. 30, 1880,	McKeesport Borough, Allegheny County,	Not in operation,	
McKees Rocks Water Co.,	Oct. 29, 1903,	McKees Rocks Borough, Allegheny County,	Affidavit of dissolution,	
McSherrystown Water Co.,	Mar. 29, 1893,	McSherrystown Borough, Adams County,	Sold to Consumers Water Co. of Hanover, now Hanover and McSherrystown Water Co.	768
Meadow Brook Water Co.,	Dec. 27, 1887,	Scranton City, Lackawanna County,	Sold to Scranton Gas and Water Co.,	420
Meadow Spring Water Co.,	June 30, 1903,	Freemansburg Borough, Northampton County	Has done no work,	
Meadville Gas and Water Co.,	April 13, 1853,	Meadville, Crawford County,	Not in operation,	
Meadville Water Co. (The),	Oct. 30, 1874,	Meadville City, Crawford County,	Sold to municipality (dissolved),	918
Mechanicsburg Gas and Water Co.,	May 5, 1854,	Mechanicsburg, Cumberland County,	Active,	789
Mechanics Water Co.,	May 20, 1904,	West Homestead Borough, Allegheny County	Sold to S. Pittsburgh Water Co.,	1164

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Name	Date of incorporation	Territory covered by charter	Present status	Page
Melboy Water Co.,	Aug. 31, 1904,	Hastings Borough, Cambria County,	Affidavit of dissolution,	
Melrose Water Co.,	Sept. 13, 1906,	Wilmerding Borough, Allegheny County,	Sold to East McKeesport Water Co.,	1177
Menallen Water Co.,	Aug. 8, 1902,	Menallen Township, Fayette County,	Active,	1193
Mercantile Water Supply Co.,	Mar. 11, 1905,	Union Township, Bedford County,	Has done no work,	
Mercer Water Co. (The),	Sept. 7, 1887,	Mercer Borough, Mercer County,	Active,	1288
Mercersburg Water Co.,	Oct. 8, 1902,	Mercersburg Borough, Franklin County,	Active,	850
Merion Water Co. (The),	April 6, 1892,	Lower Merion Township, Montgomery County	Dissolved,	
Merivale Water Supply Co.,	April 14, 1905,	Logan Township, Blair County,	Sold to Tipton Water Co.,	
Meshoppen Borough Water Co.,	Jan. 22, 1869,	Meshoppen Borough, Wyoming County,	Active,	328
Meyersdale Water Co.,	Jan. 26, 1888,	Meyersdale Borough, Somerset County,	Has done no work,	
Meyersville Water Co. (The),	Oct. 13, 1890,	Springettsbury Township, York County,	Sold to York Water Co.,	831
Middleburg Water Co. (The),	Feb. 9, 1893,	Middleburg Borough, Snyder County,	Affidavit of dissolution,	
Middleburg Water Co.,	June 15, 1903,	Middleburg Borough, Snyder County,	Active,	628
Middleport Water Co.,	April 14, 1905,	Middleport Borough, Schuylkill County,	Not in operation,	220
Middletown Consolidated Water Co.,	Sept. 3, 1884,	Middletown Borough, Dauphin County,	Merged into Middletown and Swatara Consolidated Water Co.	791
Middletown and Swatara Cons. Water Co.,	Nov. 5, 1903,	Merger, Dauphin County,	Active,	790
Midland Water Co.,	July 31, 1907,	Midland Borough, Beaver County,	Active,	1289
Midway Water Co.,	Nov. 26, 1904,	Midway Borough, Washington County,	Affidavit of dissolution,	
Mifflinburg Water Co. (The),	May 22, 1894,	Mifflinburg Borough, Union County,	Has done no work,	
Mifflintown Water Co. (The),	Sept. 18, 1891,	Mifflintown Borough, Juniata County,	Active,	705
Mifflin Water Co.,	Sept. 8, 1890,	Mifflin Township, Allegheny County,	Has done no work,	
Mifflin Water Co.,	Nov. 30, 1894,	Mifflin Township, Allegheny County,	Affidavit of dissolution,	
Milford Cold Spring Water Co.,	April 5, 1849,	Milford, Pike County,	Not in operation,	
Milford Water Co.,	May 20, 1873,	Milford, Pike County,	Active,	76
Millbrook Water Co.,	Oct. 22, 1888,	Pittston Township, Luzerne County,	Affidavit of dissolution,	
Millbrook Water Co. (The),	April 13, 1893,	Haverford Township, Delaware County,	Affidavit of dissolution,	
Millcreek Water Co.,	Oct. 30, 1907,	Millcreek Township, Lebanon County,	Active,	281
Millersburg Home Water Co.,	Aug. 21, 1890,	Millersburg, Dauphin County,	Active,	829
Millersburg Water Co.,	Oct. 30, 1907,	Millersburg Borough, Dauphin County,	Not in operation,	
Millersville Water Co.,	June 11, 1913,	Manor Township, Lancaster County,	Not in operation,	

Mill Hall Water Co. (The),	June 27, 1898,	Lamar Township, Clinton County,	Affidavit of dissolution,	
Millheim Water Co.,	April 7, 1903,	Millheim Borough, Centre County,	Active,	630
Millville Water Co.,	April 5, 1898,	Millville Borough, Columbia County,	Active,	409
Milroy Water Co.,	Dec. 1, 1899,	Armagh Township, Mifflin County,	Sold to Reedsville Water Co.,	
Milton Water Co. (The),	May 8, 1883,	Milton Borough, Northumberland County,	Sold to Mountain Water Co.,	587
Minehart Run Water Co.,	Nov. 9, 1900,	Derry Township, Mifflin County,	Merged into Lewistown-Reedsville Water Co.	701
Miners Mills Water Co.,	Nov. 10, 1886,	Miners Mills Borough, Luzerne County,	Not in operation,	
Miners Mills Water Co. (The),	Dec. 23, 1890,	Miners Mills Borough, Luzerne County,	Active,	443
Minersville Water Co.,	April 30, 1855,	Minersville, Schuylkill County,	Active,	222
Mine Spring Water Co.,	Feb. 19, 1896,	Bridgeton, Bucks County,	Affidavit of dissolution,	
Minooka Water Co.,	Oct. 1, 1888,	Minooka Village, Lackawanna County,	Active,	443
Mohnsville Water Co. (The),	Sept. 9, 1885,	Mohnsville Village, Berks County,	Active,	224
Mokoma Spring Water Co.,	Oct. 4, 1910,	LaPorte Borough, Sullivan County,	Active,	584
Monaca Water Co.,	Aug. 12, 1892,	Philipsburg Borough, Beaver County,	Affidavit of dissolution,	
Monaca Water Co.,	Oct. 24, 1901,	Monaca Borough, Beaver County,	Affidavit of dissolution,	
Monessen Water Co.,	Sept. 8, 1897,	Rostraver Township, Westmoreland County,	Name changed to Tri-Cities Water Co.,	1203
Monongahela City Water Co. (The),	July 6, 1886,	Monongahela City, Washington County,	Active,	1205
Monongahela Valley Water Co.,	Oct. 25, 1897,	Allegheny County,	Active,	1183
Monongahela Water Co.,	April 21, 1855,	Birmingham, East Birmingham and So. Pittsburgh, Allegheny County	Sold to City of Pittsburgh,	1093
Monroe Township Water Co.,	April 3, 1907,	Monroe Township, Snyder County,	Dissolved,	
Monroe Water Supply Co.,	Dec. 27, 1899,	Monroe and Luzerne Counties,	Not yet operating,	
Montandon Water Co.,	Feb. 5, 1900,	Montandon and Chillisquaque Township, Northumberland County	Subsidiary of White Deer Mountain Water Co.	586
Monterey Water Co.,	Aug. 19, 1895,	Monterey, Franklin County,	Active,	853
Montgomery Water Co. (The),	Sept. 13, 1897,	Montgomery Borough, Lycoming County,	Active,	588
Montgomery and Bucks County Water Co.,	Mar. 28, 1900,	Montgomery and Bucks Counties,	Affidavit of dissolution,	
Montola Water Co.,	April 14, 1905,	Rush Township, Centre County,	Active,	513
Montooth Water Co.,	May 20, 1904,	Montooth Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Montrose Water Co.,	July 8, 1887,	Montrose Borough, Susquehanna County,	Never operated,	
Moore Water Co.,	Oct. 24, 1900,	Plum Township, Allegheny County,	Leased by Suburban Water Co. of Allegheny County	1088
Moosic Mountain Water Co. (The),	Nov. 10, 1892,	Jessup Village, Lackawanna County,	Active,	403
Moosic Water Co. (The),	June 22, 1886,	Moosic, Lackawanna County,	Active,	443
Morea Water Co. (The),	Sept. 6, 1893,	Morea, Schuylkill County,	Active,	225
Moreland Spring Water Co.,	Aug. 3, 1909,	Moreland Township, Montgomery County,	Active,	212

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Name	Date of incorporation	Territory covered by charter	Present status	Page
Moreland Water Co.,	June 20, 1898,	Moreland Township, Montgomery County,	Sold to N. Springfield Water Co.,	257
Morrellville and Cambria Borough Water Co.,	Oct. 11, 1888,	Cambria Borough, Cambria County,	ctive,	1066
Morris Water Co.,	July 17, 1903,	Morris Township, Clearfield County,	Active,	516
Moscow Water Co.,	Oct. 17, 1888,	Madison and Covington Townships, Lackawanna County	ctive,	413
Moss Glen Water Co.,	April 14, 1905,	Schuylkill Township, Schuylkill County,	Active,	196
Mountain Brook Water Co.,	July 6, 1889,	Kingston Borough, Luzerne County,	Active,	443
Mountain City Water Co. (The),	April 7, 1883,	Frackville Borough, Schuylkill County,	Active,	616
Mountain Crest Water Co.,	Oct. 19, 1904,	Cresson Township, Cambria County,	Sold to Mountain Springs Water Co., now Summit Water Supply Co.	1090
Mountain Gap Water Co.,	Sept. 18, 1907,	Spring Township, Centre County,	Not in operation,	
Mountain Home Water Co.,	Oct. 12, 1900,	Barrett Township, Monroe County,	ctive,	77
Mountain Springs Water Co. of Wapwallopen (The)	July 13, 1894,	Wapwallopen Village, Luzerne County,	Has done no work,	
Mountain Top Water Co.,	Mar. 11, 1903,	Gallitzin Township, Cambria County,	Has done no work,	
Mountain View Water Co.,	Aug. 16, 1904,	Steelton Borough, Dauphin County,	Affidavit of dissolution,	
Mountain Water Co. (The),	May 4, 1891,	Upper Milford Township, Lehigh County,	Active,	122
Mountain Water Co.,	July 24, 1893,	South Bethlehem Borough, Northampton County	Merged into Bethlehem Consolidated Water Co	152
Mountain Water Co.,	Aug. 5, 1895,	Pittsburgh City, Allegheny County,	Has done no work,	
Mountain Water Co.,	June 15, 1900,	Milton Borough, Turbot and West Chillisquaque Townships, Northumberland County	Owned by White Deer Mountain Water Co.	587
Mountain Water Co. of Luzerne Co. (The),	Dec. 24, 1886,	Pittston, Luzerne County,	Affidavit of dissolution,	
Mountain Water Co. of New Cumberland (The)	Feb. 19, 1896,	New Cumberland Borough, Cumberland County	Merged into Riverton Consolidated Water Co.	798
Mountain Water Supply Co.,	Mar. 13, 1902,	Westmoreland Fayette, Allegheny and Washington Counties.	ctive,	1212
Mt. Carmel Water Co.,	Nov. 17, 1883,	Mt. Carmel Borough, Northumberland County	Active,	631
Mount Holly Water Co. (The),	April 11, 1895,	Mt Holly Springs Borough, Cumberland County	Active,	793
Mount Jewett Water Co.,	April 15, 1890,	Hamlin Township, McKean County,	Active,	919
Mt. Penn Suburban Water Co.,	July 9, 1903,	Mt. Penn Borough, Berks County,	Active,	226

Mt. Penn Water Co.,	May 18, 1903,	Mt. Penn Borough, Berks County,	Never operated,	
Mount Pleasant Water Co. (The),	July 11, 1881,	Mt. Pleasant Borough, Westmoreland County	Active,	1207
Mount Pocono Water Co. (The),	Mar. 8, 1895,	Pocono Village, Monroe County,	Affidavit of dissolution,	
Mount Union Water Co.,	June 28, 1899,	Mt. Union Borough, Huntingdon County,	Active,	707
Moylan Water Co.,	April 24, 1903,	Conemaugh Township, Indiana County,	Affidavit of dissolution,	
Muncy Valley Water Supply Co.,	Nov. 26, 1904,	Picture Rocks Borough, Lycoming County,	Has done no work,	
Muncy Water Co.,	July 11, 1889,	Muncy Borough, Lycoming County,	Sold to Muncy Water Supply Co.,	590
Muncy Water Supply Co. (The),	Mar. 9, 1898,	Muncy Borough, Lycoming County,	Active,	590
Munhall Borough Water Co.,	Oct. 15, 1903,	Munhall Borough, Allegheny County,	Affidavit of dissolution,	
Munhall Water Co.,	Sept. 19, 1899,	Mifflin Township, Allegheny County,	Dissolved,	
Munster Water Supply Co.,	Feb. 1, 1905,	Washington Township, Cambria County,	Sold to Mountain Springs Water Co., now Summit Water Supply Co.	1090
Myerstown Water Co.,	June 7, 1895,	Myerstown Village, Lebanon County,	Active,	228
Nanticoke Water Co. (The),	May 25, 1882,	Nanticoke Borough, Luzerne County,	Active,	443
Nanty-Glo Water Co.,	Dec. 5, 1902,	Jackson Township, Cambria County,	Leased by Cambria County Water Supply Co.	1082
Natrona Water Co.,	April 9, 1908,	Harrison Township, Allegheny County,	Active,	1083
Nazareth Water Co.,	Mar. 31, 1870,	Nazareth, Northampton County,	Merged into Blue Mountain Consolidated Water Co.	139
Nealton Water Co.,	Mar. 27, 1900,	Reyburn Township, Armstrong County,	Sold to Armstrong Water Co.,	990
Nekoda Water Supply Co.,	Mar. 11, 1905,	Greenwood Township, Perry County,	Never operated,	808
Nescopeck Water Co.,	July 9, 1891,	Nescopeck, Luzerne County,	Dissolved,	
Nescopeck Water Supply Co.,	Mar. 26, 1894,	Nescopeck Township, Luzerne County,	Active,	373
Nesquehoning Water Co.,	April 4, 1872,	Nesquehoning, Coaldale and Ashton, Carbon County	Sold to Panther Valley Water Co.,	130
Nesquehoning Water Supply Co.,	Dec. 27, 1899,	Carbon and Schuylkill Counties,	Sold to Panther Valley Water Co.,	130
Nether Providence Water Co.,	Feb. 17, 1886,	Nether Providence Township, Delaware County	Active,	
Neville Island Water Co.,	Mar. 29, 1894,	Neville Township, Allegheny County,	Affidavit of dissolution,	
Neville Township Water Co.,	May 14, 1901,	Neville Township, Allegheny County,	Sold to Monongahela Water Co.,	1093
Neville Water Co.,	April 7, 1890,	Neville Township, Allegheny County,	Not in operation,	
New Albany Water Co.,	Jan. 16, 1896,	New Albany Borough, Bradford County	Active,	331
New Berlin Water Co.,	July 17, 1901,	New Berlin Borough, Union County,	Dissolved,	
New Brighton Water Co.,	April 16, 1838,	New Brighton, Beaver County,	Leased by Beaver Valley Water Co.,	1256
New Castle Water Co.,	Mar. 26, 1859,	New Castle, Lawrence County,	Never operated,	
New Chester Water Co. (The),	Apr. 29, 1885,	Chester City, Delaware County,	Active,	198
New Cumberland Water Co.,	Apr. 15, 1895,	New Cumberland Borough, Cumberland County	Dissolved,	
New Florence Water Co.,	Aug. 25, 1902,	New Florence Borough, Westmoreland County	Sold to municipality,	1085
New Haven Water Co.,	July 22, 1884,	New Haven Borough, Fayette County,	Sold to Connellsville Water Co.,	1172

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
New Holland Water Co. (The),	April 4, 1895,	New Holland, Lancaster County,	Active,	800
New Hope Water Co.,	May 8, 1901,	New Hope Borough, Bucks County,	Never operated,	
Newmanstown Water Co. (The),	Feb. 11, 1892,	Newmanstown Village, Lebanon County,	Active,	230
New Milford Water Co. (The),	April 28, 1892,	New Milford Borough, Susquehanna County,	Active,	832
New Philadelphia Water Co.,	July 21, 1902,	New Philadelphia Borough, Schuylkill County	Affidavit of dissolution,	
Newport Home Water Co. (The),	May 10, 1893,	Newport Borough, Perry County,	Active,	709
Newport Water Co.,	Dec. 22, 1890,	Newport Borough, Perry County,	Affidavit of dissolution,	
New Salem Water Co.,	Feb. 17, 1905,	Menallen Township, Fayette County,	Active,	1189
Newtown Artesian Water Co.,	July 3, 1888,	Newtown Borough, Bucks County,	Active,	141
Newville Water Co. (The),	Jan. 8, 1890,	Newville Borough, Cumberland County,	Active,	803
New Wilmington Water Supply Co. (The),	Sept. 15, 1892,	New Wilmington Borough, Lawrence County,	Active,	1295
Niagara Water Co.,	May 20, 1904,	Sheraden Borough, Allegheny Co.,	Sold to S. Pittsburgh Water Co.,	1164
Nicholson Water Co.,	May 10, 1892,	Nicholson Borough, Wyoming Co.,	Active,	333
Nippenose Water Co.,	Oct. 19, 1909,	Nippenose Township, Lycoming County,	Active,	583
Nokomis Water Co. (The),	Nov. 26, 1890,	Factoryville, Wyoming County,	Active,	316
Norristown Insurance and Water Co.,	Mar. 31, 1847,	Norristown, Montgomery County,	Active,	233
Norristown and Lewistown Water Co.,	April 10, 1826,	Norristown and Lewistown, Montgomery County	Not in operation,	
Norristown Water Co.,	April 16, 1838,	Norristown, Montgomery County,	Not in operation,	
North Abington Water Co. (The),	May 23, 1894,	Dalton, Lackawanna County,	Active,	314
Northampton Heights Water Co.,	Dec. 4, 1901,	Northampton Heights Borough, Northampton County	Has done no work,	
Northampton Water Co.,	Feb. 13, 1816,	Northampton, Northampton County,	Not in operation,	105
North Annville Water Supply Co.,	Sept. 17, 1909,	North Annville Township, Lebanon County,	Sold to Lebanon Valley Cons. W. Co.,	782
North Branch Water Co.,	Aug. 27, 1901,	Summerhill Township, Cambria County,	Leased by Cambria County Water Supply Co.	505
North Cornwall Water Supply Co.,	Sept. 17, 1909,	North Cornwall Township, Lebanon County,	Sold to Lebanon Valley Cons. W. Co.,	782
North Coventry Water Co.,	April 27, 1909,	North Coventry Township, Chester County,	Active,	265
North Huntingdon Water Co.,	Aug. 10, 1887,	North Huntingdon Township, Westmoreland County	Sold to Westmoreland Water Co.,	1186
North Irwin Water Co.,	Nov. 14, 1895,	North Irwin Borough, Westmoreland County	Active,	1186
North Manheim Water Co.,	June 24, 1904,	North Manheim Township, Schuylkill County	Active,	231
North Mountain Water Supply Co. (The),	Aug. 16, 1897,	Luzerne County,	Active,	443
North Rochester Water Co.,	Nov. 25, 1901,	Rochester Township, Beaver County,	Leased by Beaver Valley Water Co.,	1256

North Springfield Water Co.,	June 20, 1898,	Springfield Township, Montgomery County,	Sold to Springfield Water Co.,	257
North Strabane Water Co.,	May 29, 1901,	N. Strabane Township, Washington County,	Active,	1264
Northern Cambria Water Co. (The),	Oct. 19, 1909,	Susquehanna Township, Cambria County,	Merged into Northern Cambria W. Co.,	520
Northern Cambria Water Co. (The),	Jan. 21, 1913,	Merger, Cambria County,	Active,	519
Northumberland County Water Supply Co.,	Oct. 2, 1903,	Sunbury Borough, Northumberland County,	Dissolved,	
Northumberland Water Co.,	July 29, 1892,	Northumberland Borough, Northumberland County	Active,	414
North Union Water Co.,	Oct. 30, 1890,	North Union Township, Fayette County,	Dissolved,	
North Versailles Water Co.,	Oct. 24, 1887,	N. Versailles Township, Allegheny County,	Affidavit of dissolution,	
North Wales Water Co. (The),	Oct. 11, 1886,	N. Wales Borough, Montgomery County,	Active,	236
North Washington Water Co.,	Feb. 25, 1901,	N. Washington Borough, Washington County	Sold to Citizens Water Co. of Washington	1308
Nottingham Water Co.,	Mar. 9, 1903,	Nottingham Township, Washington County,	Affidavit of dissolution,	
Oakdale Water Co.,	July 25, 1902,	Oakdale Borough, Allegheny County,	Affidavit of dissolution,	
Oak Grove Water Co.,	July 1, 1901,	Pine Creek Township, Clinton County,	Affidavit of dissolution,	
Oak Grove Water Co.,	Mar. 18, 1895,	West Butler Township, Schuylkill County,	Has done no work,	231
Oak Lane Water Co.,	June 12, 1893,	Cheltenham Township, Montgomery County,	Sold to North Springfield Water Co.,	256
Oakland Water Co. (The),	Aug. 26, 1896,	Oakland Borough, Susquehanna County,	Active,	336
Oak Ridge Water Co.,	Oct. 7, 1904,	Carbondale City, Lackawanna County,	Owned by Consolidated Water Supply Co.	420
Oakwood Water Co.,	Jan. 17, 1905,	Crafton Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	
Octoraro Water Co. (The),	April 23, 1896,	West Sadsbury Township, Chester County,	Affidavit of dissolution,	
Octoraro Water Co.,	July 13, 1903,	Merger, Chester and Lancaster Counties,	Active,	806
Ogontz Water Co.,	June 14, 1909,	Cheltenham Township, Montgomery County,	Sold to Moreland Spring Water Co.,	213
Ohio Valley Water Co.,	April 8, 1903,	McKees Rocks Borough, Allegheny County,	Active,	1285
Old Columbia Water Co.,	Mar. 31, 1821,	Columbia Borough, Lancaster County,	Act repealed,	
Old Forge Borough Water Co.,	July 16, 1901,	Old Forge Borough, Lackawanna County,	Active,	443
Old Forge Water Co.,	Feb. 4, 1889,	Marcy Township, Luzerne County,	Dissolved,	
Oliver Water Co.,	Nov. 30, 1894,	Duquesne Borough, Allegheny County,	Affidavit of dissolution,	
Oliver Water Supply Co.,	Mar. 11, 1905,	Oliver Township, Perry County,	Sold to Nekoda Water Supply Co.,	809
Olyphant Water Co.,	Jan. 17, 1889,	Olyphant Borough, Lackawanna County,	Owned by Scranton Gas and Water Co.,	420
Oneida Water Co. (The),	June 19, 1893,	East Union Township, Schuylkill County,	Leased by Wyoming Valley Water Supply Co.	416
Onnalinda Water Co.,	Feb. 27, 1901,	Onnalinda, Cambria County,	Sold to Mountain Springs Water Co., now Summit Water Supply Co.	1090
Ontario Water Co.,	May 26, 1904,	Bridgeville Borough, Allegheny County,	Affidavit of dissolution,	
Orbisonia Water Co.,	July 7, 1893,	Orbisonia Borough, Huntingdon County,	Dissolved,	
Osceola Water Supply Co.,	Aug. 12, 1889,	Osceola Mills, Clearfield County,	Active,	512
Oswayo Water Co.,	July 1, 1901,	Oswayo Borough, Potter County,	Active,	924
Otter Water Supply Co.,	April 14, 1905,	Adams Township, Cambria County,	Sold to Mountain Springs Water Co., now Summit Water Supply Co.	1090

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
Otto Water Co.,	April 14, 1905,	Reilly Township, Schuylkill County,	Not in operation,	232
Oxford Gas and Water Co.,	Mar. 24, 1868,	Oxford, Chester County,	Sold to municipality,	8
Paint Township Water Co.,	May 20, 1897,	Scalp Level, Somerset County,	Active,	1105
Palmer Township Water Co.,	Mar. 29, 1910,	Palmer Township, Northampton County,	Not in operation,	68
Palmer Water Co.,	Feb. 23, 1899,	Lower Towamensing Township, Carbon County	Active,	142
Panhandle Water Co.,	Jan. 17, 1905,	Esplen Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1160
Panther Creek Water Co. (The),	July 21, 1891,	Fell Township, Lackawanna County,	Owned by Consolidated Water Supply Co.	420
Panther Valley Water Co. (The),	May 3, 1886,	Lansford Borough, Carbon County,	Active,	129
Panther Water Co.,	April 27, 1903,	Washington Township, Jefferson County,	Affidavit of dissolution,	
Paoli Water Co.,	Nov. 6, 1893,	Paoli, Chester County,	Dissolved,	
Parker City Water Co. (The),	Jan. 16, 1891,	Parker City, Armstrong County,	Active,	994
Parkesburg Water Co.,	Sept. 17, 1889,	Parkesburg Borough, Chester County,	Active,	238
Parnassus Water Co. (The),	July 7, 1896,	Parnassus Borough, Westmoreland County,	Sold to Burrell Water Co., now Kensington Water Co.	1087
Parsons Water Co. (The),	Dec. 23, 1890,	Parsons Borough, Luzerne County,	Active,	443
Pastorius Water Co.,	Jan. 2, 1902,	Hanover Township, Lehigh County,	Never operated,	
Patterson Heights Water Co.,	June 5, 1902,	Patterson Heights Borough, Beaver County,	Leased by Beaver Valley Water Co.,	1256
Patterson Water Co. (The),	Sept. 18, 1891,	Patterson Borough, Juniata County,	Active,	710
Patton Water Co.,	Oct. 24, 1887,	Patton Township, Allegheny County,	Affidavit of dissolution,	
Patton Water Co. (The),	Nov. 16, 1893,	Patton Borough, Cambria County,	Active,	513
Paulton Water Co.,	July 20, 1900,	Washington Township, Westmoreland County	Active,	
Paupack Water Co.,	Nov. 27, 1899,	Wayne County,	Affidavit of dissolution,	
Paxtang Cons. Water Co. (The),	June 19, 1895,	Paxtang Village, Dauphin County,	Active,	774
Peckville Water Supply Co.,	Aug. 26, 1870,	Blakeley, Lackawanna County,	Sold to Archbald Water Co.,	420
Peerless Water Co.,	Aug. 31, 1893,	Sewickley Township, Westmoreland County,	Affidavit of dissolution,	
Peltzonia Water Co.,	June 11, 1901,	Cross Forks Borough, Potter County,	Affidavit of dissolution,	
Pen Argyl Water Co. (The),	May 26, 1884,	Pen Argyl, Northampton County,	Has done no work,	
Pen Argyl Water Co.,	July 15, 1889,	Pen Argyl Borough, Northampton County.	Merged into Blue Mountain Consolidated Water Co.	139
Penn Borough Water Co.,	Aug. 10, 1887,	Penn Borough, Westmoreland County,	Sold to Westmoreland Water Co.,	1186
Penn Township Water Co. of York County,	Dec. 6, 1910,	Penn Township, York County,	Active,	768

Penn Run Water Co.,	Mar. 9, 1903,	Cherryhill Township, Indiana County,	Merged into Branch Water Co.,	
Pennsburg Water Co.,	Nov. 2, 1896,	Pennsburg Borough, Montgomery County,	Active,	240
Pennsylvania Water Co.,	Mar. 18, 1887,	Sterrett Township, Allegheny County,	Merged into Pennsylvania Water Co.,	1125
Pennsylvania Water Co.,	May 26, 1902,	Merger, Allegheny County,	Active,	1123
Penn Township Water Co.,	Aug. 10, 1887,	Penn Township, Westmoreland County,	Sold to Westmoreland Water Co.,	1186
Penn Township Water Co.,	Aug. 6, 1902,	Penn Township, Clearfield County,	Not in operation,	
Penn Water Co. of Sharon Hill Borough (The)	Mar. 7, 1892,	Sharon Hill Borough, Delaware County,	Sold to Springfield Water Co.,	258
Penn Water Co. (The),	June 27, 1885,	North Chester Borough, Delaware County,	Sold to New Chester Water Co.,	199
Penn Water Co.,	Mar. 18, 1887,	Braddock Township, Allegheny County,	Sold to Pennsylvania Water Co.,	1125
Peoples Water Co. (The),	May 19, 1887,	Tredyffrin Township, Chester County,	Affidavit of dissolution,	
Peoples Water Co.,	Jan. 11, 1892,	Chartiers Borough, Allegheny County,	Dissolved,	
Peoples Water Co. of Abington Township,	June 20, 1898,	Abington Township, Montgomery County,	Sold to N. Springfield Water Co.,	256
Peoples Water Co. of Beaver Falls,	Dec. 17, 1896,	Beaver Falls Borough, Beaver County,	Affidavit of dissolution,	
Peoples Water Co. of Canonsburg,	July 3, 1901,	Canonsburg Borough, Washington County,	Controlled by North Strabane Water Co.,	1264
Peoples Water Co. of Coraopolis, Pa.,	Dec. 20, 1895,	Coraopolis Borough, Allegheny County,	Affidavit of dissolution,	
Peoples Water Co. of Darby Township (The),	Mar. 7, 1892,	Darby Township, Delaware County,	Sold to N. Springfield Water Co.,	258
Peoples Water Co. of Delaware Co.,	Aug. 6, 1901,	Haverford Township, Delaware County,	Sold to N. Springfield Water Co.,	257
Peoples Water Co. of Pittston, Pa.,	July 15, 1889,	Pittston Borough, Luzerne County,	Active,	443
Peoples Water Co. of Plymouth Township, Luzerne County, Pa.	Dec. 8, 1903,	Plymouth Township, Luzerne County,	Dissolved,	
Peoples Water Co. of Rush Township, Centre County, Pa.	June 27, 1901,	Rush Township, Centre County,	Active,	516
Peoples Water Co. of Sadsbury, Pa.,	June 1, 1903,	Sadsbury Township, Chester County,	Merged into Octoraro Water Co.,	809
Peoples Water Co. of Scranton, Pa.,	June 14, 1889,	Scranton City, Lackawanna County,	Active,	443
Peoples Water Co. of Sharon Hill (The),	July 11, 1892,	Sharon Hill Borough, Delaware County,	Has done no work,	
Peoples Water Co. of Summerville,	Oct. 2, 1903,	Summerville Borough, Jefferson County,	Active,	1007
Peoples Water Co. of Turtle Creek,	Nov. 19, 1900,	Turtle Creek Borough, Allegheny County,	Has done no work,	
Peoples Water Co. of Wilkes-Barre, Pa. (The),	May 19, 1891,	Wilkes-Barre City, Luzerne County,	Affidavit of dissolution,	
Peoples Water Storage and Supply Co.,	Jan. 25, 1901,	Greene Township, Pike County,	Affidavit of dissolution,	
Peoples Water Supply Co.,	April 29, 1874,	Pittsburgh, Allegheny County,	Not in operation,	
Peoples Water Supply Co.,	June 13, 1889,	Wilkins Township, Allegheny County,	Merged into Pennsylvania Water Co.,	1125
Perkasie Water Co.,	April 8, 1895,	Perkasie Borough, Bucks County,	Sold to Perkasie Water Supply Co.,	241
Perkasie Water Supply Co.,	June 2, 1902,	Perkasie Borough, Bucks County,	Active,	241
Perry Water Co.,	Dec. 7, 1896,	Perry Township, Fayette County,	Active,	1193
Perryopolis Water Co.,	Feb. 16, 1905,	Perry Township, Fayette County,	Has done no work,	
Perrysville Water Co.,	May 29, 1903,	Ross Township, Allegheny County,	Sold to Ohio Valley Water Co.,	1286
Peters Water Co.,	Mar. 9, 1903,	Peters Township, Washington County,	Affidavit of dissolution,	
Petrolia Gas and Water Co.,	Mar. 22, 1865,	Oil City, Venango County,	Not in operation,	
Philadelphia and Bristol Water Co.,	Dec. 5, 1904,	Ben Salem Township, Bucks County,	Active,	253
Philadelphia Water and Filter Co.,	May 7, 1896,	Philadelphia City, Philadelphia County,	Affidavit of dissolution,	
Philadelphia Water Supply Co.,	Dec. 10, 1894,	Philadelphia City,	Has done no work,	
Philipsburg Water Co. (The),	June 15, 1881,	Philipsburg, Centre County,	Merged into Citizens Water Co.,	516

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Name	Date of incorporation	Territory covered by charter	Present status	Page
Philipsburg Water Co.,	June 25, 1888,	Philipsburg Borough, Beaver County,	Never operated,	
Philipsburg Water Co.,	July 1, 1890,	Philipsburg Borough, Beaver County,	Sold to Valley Water Co.,	
Phoenix Water Co.,	Jan. 20, 1909,	Windsor Borough, York County,	Merged into York County Consolidated Water Co.	751
Pike County Water Supply Co.,	Sept. 4, 1901,	Blooming Grove Township, Pike County,	Not in operation,	
Pine Creek Valley Water Co.,	Aug. 11, 1904,	Shaler Township, Allegheny County,	Not operating,	
Pine Grove Water Co.,	Jan. 15, 1877,	Pine Grove Mills, Centre County,	Active,	556
Pine Grove Water Co. (The),	Oct. 14, 1890,	Pine Grove Borough, Schuylkill County,	Has done no work,	
Pine Grove Water Co. of Schuylkill Co. (The),	Dec. 13, 1886,	Pine Grove Borough, Schuylkill County,	Affidavit of dissolution,	
Pine Hill Water Co.,	Feb. 26, 1904,	Landingville Borough, Schuylkill County,	Active,	231
Pine Township Water Co.,	Feb. 10, 1903,	Pine Township, Indiana County,	Active,	1062
Pioneer City Water Co.,	Aug. 26, 1901,	Carbondale City, Lackawanna County,	Has done no work,	
Pitcairn Water Co.,	Oct. 12, 1900,	Pitcairn Borough, Allegheny County,	Affidavit of dissolution,	
Pitcairn Water Co.,	Nov. 11, 1901,	Pitcairn Borough, Allegheny County,	Merged into Trafford Water Co.,	1223
Pittston City Water Co.,	July 16, 1901,	Pittston City, Luzerne County,	Active,	443
Pittston Township Water Co.,	July 16, 1901,	Pittston Township, Luzerne County,	Active,	443
Pittston Water Co.,	May 4, 1852,	Pittston, Luzerne County,	Not in operation,	
Plainfield Water Co.,	Jan. 2, 1913,	Plainfield Township, Northampton County,	Active,	79
Plains Township Water Co.,	July 16, 1901,	Plains Township, Luzerne County,	Active,	443
Plainsville Water Co. (The),	May 20, 1890,	Plains Township, Luzerne County,	Active,	443
Plains Water Co. (The),	Nov. 23, 1885,	Plains Township, Luzerne County,	Dissolved,	
Pleasant Gap Water Supply Co.,	June 20, 1910,	Pleasant Gap, Centre County,	Active,	557
Pleasant Gap Water Co.,	Dec. 3, 1907,	Spring Township, Centre County,	Has done no work,	
Plockhoy Water Co.,	Jan. 2, 1902,	Freemansburg Borough, Northampton County	Has done no work,	
Plymouth Water Co. (The),	June 12, 1875,	Plymouth Borough and Township, Luzerne County	Active,	443
Pocono Knob Water Co.,	July 7, 1908,	Coolbaugh Township, Monroe County,	Dissolved,	
Pocono Lake Water Co.,	Sept. 1, 1909,	Tobyhanna Township, Monroe County,	Active,	143
Pocono Mountain Water Supply Co.,	Sept. 26, 1899,	Tunkhannock, Tobyhanna and Coolbaugh Townships, Monroe County	Never operated,	
Point Marion Water Co. (The),	Aug. 10, 1892,	Point Marion Village, Fayette County,	Never operated,	
Point Township Water Co.,	July 23, 1903,	Point Township, Northumberland County,	Has done no work,	
Pompeii Water Co.,	Feb. 2, 1910,	Washington Township, Northampton County	Active,	79

Portage Water Co.,	1914,	Portage Borough, Martindale, Springhill and Trout Run, Cambria County	Active,	1103
Port Allegany Water Co. (The),	Oct. 16, 1884,	Port Allegany Borough, McKean County,	Active,	927
Port Matilda Water Co.,	Nov. 30, 1909,	Port Matilda Village, Centre County,	Active,	558
Porter Water Co.,	Nov. 8, 1901,	Porter Township, Lycoming County,	Active,	583
Portland Water Co.,	Feb. 9, 1904,	Portland Borough, Northampton County,	Active,	81
Port Royal Water Supply Co. (The),	Aug. 23, 1910,	Port Royal Borough, Juniata County,	Active,	712
Port Royal Water Co.,	May 2, 1902,	Port Royal Borough, Juniata County,	Has done no work,	1215
Port Vue Water Co.,	April 24, 1901,	Port Vue Borough, Allegheny County,	Active,	1062
Possum Glory Water Co.,	Feb. 10, 1903,	Pine Township, Indiana County,	Active,	488
Potter County Water Co.,	Dec. 3, 1897,	Austin Borough, Potter County,	Charter annulled,	
Pottstown Gas and Water Co.,	April 2, 1869,	Pottstown, Montgomery County,	Active,	265
Pottsville Water Co. (The),	April 11, 1834,	Pottsville, Schuylkill County,	Active,	267
Priceburg Water Co. (The),	May 25, 1899,	Priceburg Village, Lackawanna County,	Active,	387
Progress Water Supply Co.,	April 14, 1905,	Susquehanna Township, Dauphin County,	Sold to Dauphin Consolidated Water Supply Co.	752
Prospect Rock Water Co. (The),	Dec. 9, 1895,	Laurel Run Borough, Luzerne County,	Not in operation,	
Providence Borough Water Co.,	May 4, 1864,	Providence, Luzerne County,	Not in operation,	
Providence Gas and Water Co.,	Feb. 23, 1867,	Scranton, Lackawanna County,	Sold to Scranton Gas and Water Co.,	420
Providence Water Co.,	June 1, 1903,	Providence Township, Lancaster County,	Merged into Octoraro Water Co.,	800
Provident Water Co. (The),	April 4, 1899,	Rochester Borough, Beaver County,	Affidavit of dissolution,	
Pulaski Water Co.,	July 1, 1890,	Pulaski Township, Beaver County,	Sold to Valley Water Co.,	
Pulaski Water Co.,	April 14, 1905,	Pulaski, Lawrence County,	Active,	1296
Punxsutawney Water Co. (The),	May 3, 1887,	Punxsutawney Borough, Jefferson County,	Controlled by Lindsey Water Co.,	986
Pure Mountain Water Co.,	June 28, 1912,	Black Township, Somerset County,	Active,	1196
Pure Spring Water Co. of Fogelsville,	Feb. 17, 1854,	Fogelsville, Lehigh County,	Not in operation,	
Pure Spring Water Co. of Kennett Square,	Feb. 21, 1846,	Kennett Square, Chester County,	Sold to municipality,	8
Pure Water Co.,	Feb. 27, 1900,	Norristown Borough, Montgomery County,	Has done no work,	
Pure Water Supply Co.,	May 18, 1900,	White Deer Township, Union County,	Affidavit of dissolution,	
Pure Water Supply and Transportation Co.,	July 12, 1899,	Philadelphia City,	Affidavit of dissolution,	
Puritan Water Co.,	June 22, 1896,	Unity Township, Westmoreland County,	Active,	1039
Purity Water Co.,	May 11, 1904,	Sheridan Borough, Allegheny County,	Affidavit of dissolution,	
Purity Water Co.,	Oct. 14, 1904,	McClure Village, Snyder County,	Active,	627
Putman Water Co.,	Jan. 5, 1893,	Chartiers Borough, Allegheny County,	Sold to St. Clair Water Co.,	1164
Quaker City Water Co.,	Dec. 30, 1898,	Philadelphia City,	Dissolved,	
Quakertown Water Co. (The),	April 10, 1893,	Quakertown Borough, Bucks County,	Active,	145
Quarryville Water Co. (The),	Feb. 6, 1894,	Quarryville Borough, Lancaster County,	Active,	812
Quarry Water Co.,	Sept. 9, 1901,	St. Clair Township, Westmoreland County,	Sold to High Ridge Water Supply Co.,	1090
Raccoon Water Co.,	Dec. 9, 1901,	Aliquippa Borough, Beaver County,	Affidavit of dissolution,	
Radnor Water Co.,	Jan. 4, 1886,	Radnor Township, Delaware County,	Affidavit of dissolution,	
Radnor Water Co. (The),	Nov. 17, 1891,	Radnor Township, Delaware County,	No work done,	
Ramey Water Co.,	Mar. 30, 1909,	Ramey Borough, Clearfield County,	Active,	509
Rauchstown Water Co.,	May 29, 1871,	Rauchstown, Clinton County,	Has done no work,	

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Name	Date of incorporation	Territory covered by charter	Present status	Page
Rahn Township Water Co.,	Oct. 23, 1900,	Rahn Township, Schuylkill County,	Sold to Panther Valley Water Co.,	130
Rayburn Water Co.,	Jan. 19, 1898,	Rayburn Township, Armstrong County,	Sold to Armstrong Water Co.,	990
Rayne Water Co.,	Aug. 31, 1904,	Rayne Township, Indiana County,	Not in operation,	
Reading Suburban Water Co.,	Oct. 28, 1902,	Muhlenberg Township, Berks County,	ctive,	211
Reading Water Co.,	Mar. 16, 1819,	Reading, Berks County,	Sold to city,	269
Rebecca Water Co.,	Sept. 23, 1901,	Cresson Township, Cambria County,	Active,	1052
Rebersburg Water Co. (The),	Sept. 11, 1896,	Reb rsburg, Centre County,	Active,	634
Red Bank Water Co.,	Nov. 19, 1901,	South Bethlehem Borough, Armstrong County	Merged into Citizens Water Co. of New Bethlehem	993
Red Hill Water Co.,	April 21, 1911,	Red Hill Borough, Montgomery County,	Active,	274
Red Lion Water Co. (The),	June 26, 1893,	Red Lion Borough, York County,	Active,	814
Redstone Water Co.,	Oct. 13, 1887,	South Union Township, Fayette County,	Merged into Youghgahela Water Co.,	1166
Red Water Co.,	Sept. 18, 1907,	Washington Township, Fayette County,	Merged into Belle Vernon Water Co.,	1152
Reeders Water Storage Co.,	Sept. 4, 1900,	Jackson Township, Monroe County,	Dissolved,	
Reedsville Water Co.,	Nov. 21, 1899,	Armagh, Brown and Derry Townships, Mifflin County	Merged into Lewistown-Reedsville Water Co.	701
Reliance Water Co.,	Nov. 1, 1910,	Franconia Township, Montgomery County,	Merged into Telford Water Co.,	288
Rendham Water Co.,	Oct. 18, 1888,	Rendham Village, Lackawanna County,	Active,	443
Renovo Gas and Water Co.,	May 4, 1884,	Renovo, Clinton County,	Never operated,	
Revere Water Co.,	Feb. 15, 1905,	South Union Township, Fayette County,	Active,	1210
Reynoldsville Water Co.,	Sept. 24, 1888,	Reynoldsville, Ohiotown and Prescottville, Jefferson County	Active,	995
Reynshanhurst Water Co.,	Mar. 28, 1900,	Carbondale City, Lackawanna County,	Owned by Consolidated Water Supply Co.	420
Rheems Water Co.,	Sept. 13, 1903,	West Donegal Township, Lancaster County,	Active,	815
Richland Water Co. of Richland, Pa.,	Sept. 10, 1888,	Richland, Lebanon County,	Active,	275
Rich Hill Water Co.,	June 24, 1903,	Spring Hill Township, Fayette County,	Active,	1211
Richland Township Water Co.,	May 25, 1897,	Richland Township, Cambria County,	Active,	1105
Richlandtown Water Co.,	Aug. 12, 1895,	Richlandtown Borough, Bucks County,	Has done no work,	
Ridge Water Co.,	Jan. 17, 1905,	Ingram Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1160
Ridgway Water Co. (The),	July 7, 1885,	Ridgway Park Borough, Elk County,	Has done no work,	
Ridley Park Cold Spring Water Co. of Ridley Park	June 26, 1889,	Ridley Park Borough, Delaware County,	Sold to Springfield Water Co.,	258
Ridley Township Water Co.,	Nov. 18, 1890,	Ridley Township, Delaware County,	Affidavit of dissolution,	
Ridley Water Co. (The),	Jan. 8, 1886,	Ridley Township, Delaware County,	Affidavit of dissolution,	

Ridley Water Co.,	June 7, 1907,	Eddystone Borough, Delaware County,	Affidavit of dissolution,	
Ringtown Spring Water Supply Co.,	April 26, 1910,	Ringtown Borough, Schuylkill County,	Active,	417
Ringtown Water Co.,	Sept. 7, 1909,	Ringtown Borough, Schuylkill County,	Dissolved,	
Risco Water Co.,	Mar. 4, 1908,	Crescent Township, Allegheny County,	Sold at public sale,	
Rittersville Water Co.,	July 12, 1899,	Hanover Township, Lehigh County,	Affidavit of dissolution,	
Riverside Water Co.,	Feb. 6, 1903,	East Pennsboro Township, Cumberland County	Not in operation,	
Riverton Water Co.,	1904,	Lemoyne Borough, Cumberland County,	Merged into Riverton Consolidated Water Co.	798
Riverton Consolidated Water Co.,	Feb. 17, 1904,	Merger, Cumberland and York Counties,	Active,	797
Riverview Water Co.,	Sept. 10, 1894,	Avalon Borough, Allegheny County,	Sold to Valley Consolidated Water Co.,	1286
Roaring Creek Water Co. (The),	Nov. 11, 1884,	Shamokin Borough, Northumberland County	Active,	432
Robesonia Water Co.,	Dec. 22, 1898,	Robesonia, Berks County,	Merged into Womelsdorf Consolidated Water Co.	296
Robinson Township Water Co.,	Dec. 12, 1893,	Robinson Township, Allegheny County,	Sold to Monongahela Water Co.,	1093
Robinson Water Co. (The),	Jan. 17, 1887,	Robinson Township, Allegheny County,	Has done no work,	
Rochester Water Co.,	May 17, 1887,	Rochester Borough, Beaver County,	Never operated,	
Rockcliff Water Co.,	Feb. 29, 1888,	Clifford Township, Susquehanna County,	Owned by Consolidated Water Supply Co.	420
Rockhill Water Co.,	May 2, 1911,	Telford Borough, Bucks County,	Merged into Telford Water Co.,	288
Rockledge Water Co.,	Sept. 1, 1909,	Rockledge Borough, Montgomery County,	Owned by Springfield Consolidated Water Co.	256
Rock Spring Water Co.,	Mar. 28, 1873,	Hazleton and West Hazleton, Luzerne County	Not in operation,	
Rockville Water Co.,	May 28, 1896,	Harrisburg City, Dauphin County,	Affidavit of dissolution,	
Rock Water Co.,	April 27, 1905,	Tremont Township, Schuylkill County,	Not in operation,	232
Rockwood Water Co.,	April 14, 1905,	Rockwood Borough, Somerset County,	Active,	1218
Rocky Glen Water Co.,	Feb. 11, 1901,	Moosic Borough, Lackawanna County,	Not in operation,	412
Rocky Springs Water Co.,	Mar. 30, 1909,	Bell Township, Clearfield County,	Active,	974
Roscoe Water Co.,	July 10, 1901,	Roscoe Borough, Washington County,	Affidavit of dissolution,	
Roselawn Water Co.,	Aug. 23, 1910,	Logan Township, Blair County,	Active,	662
Roseto Water Co.,	Jan. 2, 1913,	Roseto Borough, Northampton County,	Leased to Bangor Water Co.,	61
Rosslyn Water Co.,	Jan. 17, 1905,	Carnegie Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1160
Rostraver Water Co.,	July 28, 1902,	Rostraver Township, Westmoreland County,	Affidavit of dissolution,	
Ross Water Co.,	April 8, 1903,	Ross Township, Allegheny County,	Has done no work,	930
Roulet Water Co.,	Feb. 3, 1904,	Roulet Township, Potter County,	Active,	
Rouseville Water Co. (The),	June 10, 1891,	Rouseville Village, Venango County,	Affidavit of dissolution,	
Rouzerville Water Co.,	April 12, 1898,	Rouzerville Village, Franklin County,	Active,	855
Rowenna Water Co. (The),	Aug. 11, 1893,	Rowenna Village, Lancaster County,	Active,	816
Royalton Water Co.,	Nov. 12, 1901,	Royalton Borough, Dauphin County,	Dissolved,	
Rural Water Co.,	May 13, 1889,	Wilkins Township, Allegheny County,	Merged into Pennsylvania Water Co.,	1125
Rush Brook Water Co. (The),	May 24, 1892,	Jermyn Borough, Lackawanna County,	Merged into Jermyn and Rush Brook Water Co.	420

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
Rush Township Water Co.,	June 27, 1901,	Rush Township, Centre County,	Affidavit of dissolution,	
Rutherford Heights Water Supply Co.,	Mar. 13, 1907,	Swatara Township, Dauphin County,	Controlled by Paxtang Consolidated Water Supply Co.	775 809
Ryde Water Supply Co.,	Mar. 11, 1905,	Wayne Township, Mifflin County,	Sold to Greenmount Water Supply Co.,	
Sadsbury Water Co. (The),	April 23, 1890,	Sadsbury Township, Chester County,	Dissolved,	
Saint Benedict Water Co.,	Mar. 7, 1907,	Carroll Township, Cambria County,	Active,	518
St. Clair Water Co. (The),	June 27, 1892,	Lower St. Clair Township, Allegheny County	Sold to Chartiers Valley Water Co.,	1161
St. Clair Water Co.,	Sept. 11, 1901,	St. Clair Township, Westmoreland County,	Affidavit of dissolution,	
St. Davids Water Co. (The),	April 13, 1893,	Radnor Township, Delaware County,	Affidavit of dissolution,	
St. Lawrence Water Co.,	June 11, 1901,	St. Lawrence, Berks County,	Active,	277
St. Marys Water Co.,	July 12, 1889,	St. Marys Borough, Elk County,	Active,	1002
Saint Petersburg Water Co.,	Mar. 22, 1872,	St. Petersburg, Clarion County,	Never operated,	
St. Petersburg Water Co. (The),	Sept. 5, 1882,	St. Petersburg Borough, Clarion County,	Active,	1004
Salem Water Co.,	Oct. 20, 1887,	Salem Township, Westmoreland County,	Not in operation,	
Salisbury and South Allentown Water Co.,	April 19, 1901,	Salisbury Township, Lehigh County,	Affidavit of dissolution,	
Salisbury Water Co.,	Dec. 23, 1901,	Salisbury Borough, Somerset County,	Dissolved,	
Salladasburg Water Co.,	Oct. 19, 1909,	Salladasburg Borough, Lycoming County,	Active,	583
Saltsburg Water Co.,	Jan. 3, 1889,	Saltsburg Borough, Indiana County,	Affidavit of dissolution,	
Sand Run Water Co.,	Oct. 23, 1902,	Richland Township, Cambria County,	Dissolved,	
Sand Spring Water Co. of Meyersdale,	Jan. 26, 1888,	Meyersdale Borough, Somerset County,	Active,	1200
Sandy Lake Water Works,	Nov. 30, 1900,	Sandy Lake Borough, Mercer County,	Active,	934
Sanitary Water Supply Co.,	July 9, 1889,	Whitemarsh Township, Montgomery County,	Affidavit of dissolution,	
Saucon Springs Water Co.,	Mar. 3, 1902,	So. Bethlehem Borough, Northampton County	Affidavit of dissolution,	
Saucon Spring Water Co.,	Mar. 30, 1909,	Lower Saucon Township, Northampton County	Dissolved,	
Saxton Water Co.,	Feb. 14, 1902,	Saxton Borough, Bedford County,	Active,	685
Sayre Water Co. (The),	Aug. 25, 1881,	Sayre and Athens Villages and Athens Township, Bradford County	Active,	338
Schaefferstown Water Co.,	April 16, 1845,	Schaefferstown, Lebanon County,	Active,	818
Schuylkill Haven Gas and Water Co.,	April 9, 1855,	Schuylkill Haven, Schuylkill County,	Active,	278
Schuylkill Township Water Co.,	June 20, 1898,	Schuylkill Township, Chester County,	Sold to Berwyn Water Co.,	258
Schuylkill Water Co. (The),	Aug. 17, 1882,	Tuscarora and Patterson Villages, New Philadelphia and Middleport Boroughs, Schuylkill County	Not in operation,	

Schuylkill Water Co.,	Sept. 10, 1889,	Philadelphia City,	Affidavit of dissolution,	
Scotia Water Co.,	Nov. 25, 1900,	Jefferson Township, Allegheny County,	Affidavit of dissolution,	
Scotia Water Supply Co.,	July 29, 1904,	Jefferson Township, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Scottdale Water Co.,	Mar. 1, 1883,	Scottdale Borough, Westmoreland County,	Dissolved,	
Scott Township Water Co.,	Dec. 12, 1893,	Scott Township, Allegheny County,	Sold to Monongahela Water Co.,	1093
Scott Water Co. (The),	Jan. 17, 1887,	Scott Township, Allegheny County,	Has done no work,	
Scott Water Co.,	Oct. 30, 1900,	Scott Township, Allegheny County,	Has done no work,	
Scranton Gas and Water Co.,	Mar. 16, 1854,	Providence Township, Luzerne County,	Active,	418
Selinsgrove Water Supply Co. (The),	1901,	Selinsgrove Borough, Snyder County,	Active,	635
Senwick Water Co.,	June 5, 1902,	Jackson Township, Cambria County,	Leased by Cambria County Water Supply Co.	1082
Seward Water Co.,	Sept. 10, 1901,	St. Clair Township, Westmoreland County,	Affidavit of dissolution,	
Sewickley Water Co.,	April 26, 1910,	Mt. Pleasant Township, Westmoreland County	Active,	1159
Shamokin Dam Water Co.,	Feb. 24, 1903,	Monroe Township, Snyder County,	Has done no work,	
Shamokin Water Co.,	Mar. 12, 1865,	Shamokin, Northumberland County,	Active,	432
Sharon Gas and Water Co.,	April 11, 1863,	Sharon, Mercer County,	Never operated as water company,	
Sharon Hill Water Co.,	Jan. 13, 1886,	Sharon Hill Borough, Delaware County,	Never operated,	
Sharon Water Works Co. (The),	Nov. 20, 1883,	Sharon Borough, Mercer County,	Active,	1299
Sharp Mountain Water Co.,	Nov. 26, 1895,	Branch Township, Schuylkill County,	Dissolved,	
Sharpsburg and Etna Water Co. (The),	Jan. 12, 1882,	Sharpsburg Borough, Allegheny County,	Affidavit of dissolution,	
Sharpsville Water Works Co.,	Oct. 3, 1887,	Sharpsburg Borough, Mercer County,	Never operated,	
Shavertown Water Co.,	May 29, 1908,	Kingston Township, Luzerne County,	Dissolved,	
Shawnee Water Co.,	July 6, 1889,	Plymouth Borough, Luzerne County,	Active,	443
Shawnee Water Supply Co.,	Mar. 7, 1907,	Shawnee Village, Monroe County,	Active,	82
Sheafers Creek Water Co.,	June 27, 1893,	Branch Township, Schuylkill County,	Active,	282
Sheffield Water Co.,	April 17, 1906,	Sheffield Village, Warren County,	Active,	935
Shenandoah Citizens Water and Gas Co.,	Feb. 25, 1870,	Shenandoah, Schuylkill County,	Active,	434
Shenango Water Co.,	Nov. 29, 1897,	Mahoningtown Borough, Lawrence County,	Merged into City of New Castle Water Co.	1293
Sheraden Water Co.,	June 24, 1895,	Sheraden Borough, Allegheny County,	Affidavit of dissolution,	
Shickshinny Water Co.,	Mar. 12, 1866,	Shickshinny, Luzerne County,	Not in operation,	
Shickshinny Water Co. (The),	Nov. 16, 1883,	Shickshinny, Luzerne County,	Active,	437
Shinglehouse Water Co.,	May 13, 1902,	Shinglehouse Borough, Potter County,	Affidavit of dissolution,	
Shippensburg Water Co. (The),	Dec. 22, 1884,	Shippensburg Borough, Cumberland County	Affidavit of dissolution,	
Shiremanstown Water Co.,	Aug. 31, 1903,	Shiremanstown Borough, Cumberland County	Active,	798
Shirland Water Co.,	June 29, 1904,	Scott Township, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Shoustown Water Co.,	Aug. 12, 1901,	Crescent Township, Allegheny County,	Affidavit of dissolution,	
Shrewsbury Water Co. (The),	June 24, 1891,	Shrewsbury Borough, York County,	Active,	820
Sides Water Co.,	June 9, 1908,	Burrell Township, Indiana County,	Not in operation,	
Siegfried-Northampton Water Co.,	June 26, 1901,	Alliance Borough, Northampton County,	Affidavit of dissolution,	
Silver Brook Water Co. (The),	June 1, 1886,	Kline Township, Schuylkill County,	Affidavit of dissolution,	
Silver Brook Water Co. (The),	Jan. 17, 1893,	Nescopeck Township, Luzerne County,	Affidavit of dissolution,	

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Name	Date of incorporation	Territory covered by charter	Present status	Page
Silver Creek Water Co.,	May 21, 1889,	Blythe Township, Schuylkill County,	Active,	231
Silver Spring Water Co. (The),	April 23, 1895,	Mechanicsburg Borough, Cumberland County	Has done no work,	
Sinking Spring Water Co.,	Aug. 16, 1894,	Sinking Spring Village, Berks County,	Active,	283
Siverly Water Co.,	Sept. 30, 1901,	Siverly Borough, Venango County,	Dissolved,	
Skippack Water Co. (The),	April 13, 1893,	Lower Providence Township, Montgomery County	Affidavit of dissolution,	
Slaters Water Co. of East Bangor,	July 17, 1899,	East Bangor Borough, Northampton County	Affidavit of dissolution,	
Slatington Water Co.,	Mar. 29, 1881,	Slatington, Lehigh County,	Sold to municipality,	8
Slippery Rock Water Co.,	Dec. 3, 1907,	Perry Township, Lawrence County,	Dissolved,	
Slocum Spring Water Co. (The),	April 28, 1885,	Tunkhannock Borough, Wyoming County,	Not in operation,	
Smethport Water Co. (The),	April 4, 1891,	Smethport Borough, McKean County,	Active,	938
Smithton Water Co. (The),	Oct. 9, 1911,	Smithton Borough, Westmoreland County,	Not in operation,	
Snowden Water Co.,	Nov. 26, 1900,	Snowden Township, Allegheny County,	Affidavit of dissolution,	
Snowden Water Supply Co.,	July 20, 1904,	Snowden Township, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Snow Shoe Water Co.,	Mar. 11, 1905,	Snow Shoe Township, Centre County,	Active,	560
Solomon Run Water Co.,	Oct. 28, 1901,	Johnstown, Cambria County,	Affidavit of dissolution,	
Sonman Water Supply Co.,	Mar. 11, 1905,	Portage Township, Cambria County,	Sold to Mountain Springs Water Co., now Summit Water Supply Co.	1090
Soudertown Water Co.,	Oct. 11, 1895,	Soudertown, Montgomery County,	Affidavit of dissolution,	
South Abington Water Co.,	Jan. 29, 1894,	South Abington, Lackawanna County,	Dissolved,	
South Annville Water Supply Co.,	Sept. 17, 1909,	South Annville Township, Lebanon County,	Sold to Lebanon Valley Cons. W. Co.,	782
South Bethlehem Water Co.,	Dec. 4, 1901,	South Bethlehem Borough, Northampton County	Has done no work,	
South Bradford Water Co.,	Sept. 23, 1901,	Bradford Township, McKean County,	Never operated,	
South Buffalo Water Co.,	July 14, 1898,	South Buffalo Township, Armstrong County	Affidavit of dissolution,	
South Canonsburg Water Co.,	May 29, 1901,	South Canonsburg Borough, Washington County	Controlled by North Strabane Water Co.,	1264
South Chester Water Co. (The),	June 27, 1885,	South Chester Borough, Delaware County,	Sold to New Chester Water Co.,	199
South Danville and Riverside Water Co.,	July 28, 1874,	South Danville and Riverside, Northumberland County	Has done no work,	

South Easton Water Co. (The),	Feb. 4, 1886,	South Easton Borough, Northampton County	Active,	68
Southern Water Supply Co.,	June 20, 1902,	Springfield Township, Fayette County,	Merged into Western Water Supply Co.,	
South Fork Water Co.,	Aug. 1, 1892,	South Fork Borough, Cambria County,	Active,	1108
South Huntingdon Water Co.,	July 7, 1908,	South Huntingdon Township, Westmoreland County	Not in operation,	
South Mountain Water Co. (The),	Dec. 17, 1884,	Philadelphia City,	Has done no work,	
South Mountain Water Co. (The),	Dec. 18, 1886,	Philadelphia City,	Has done no work,	
South Philipsburg Water Co.,	June 27, 1901,	South Philipsburg Borough, Centre County,	Dissolved,	
South Pittsburgh Water Co.,	July 15, 1904,	Bridgeville Borough, Allegheny County,	Active,	1160
South Renovo Water Co.,	Jan. 30, 1889,	South Renovo Borough, Clinton County,	Sold to municipality,	8
South Sharon Water Co.,	Jan. 10, 1900,	South Sharon Village, Mercer County,	Controlled by Sharon Water Works Co.,	1299
South Side Spring Water Co.,	Oct. 31, 1895,	Palmer Township, Northampton County,	Affidavit of dissolution,	
South Side Water Co. (The),	Mar. 25, 1885,	Duboistown Borough, Lycoming County,	Has done no work,	
South Strabane Water Co.,	Aug. 26, 1912,	South Strabane Township, Washington County	Leased to Citizens Water Co. of Washington, Pa.	1308
South Union Water Co.,	Dec. 5, 1904,	South Union Township, Fayette County,	Controlled by South West Water Co.,	1210
South Versailles Water Co.,	Nov. 25, 1901,	North Versailles Township, Allegheny County	Sold to East McKeesport Water Co.,	1177
South View Water Co. (The),	Nov. 7, 1890,	Baldwin Township, Allegheny County,	Sold to Monongahela Water Co.,	
South Washington Water Co.,	Feb. 25, 1901,	South Washington Borough, Washington County	Sold to Citizens Water Co. of Washington	1308
South Waverly Water Co. (The),	April 18, 1881,	South Waverly Borough, Bradford County,	Active,	340
South Western Water Supply Co.,	June 20, 1902,	Springfield Township, Fayette County,	Merged into Western Water Supply Co.,	
South West Water Co. (The),	June 24, 1892,	North Union Township, Fayette County,	Active,	1210
South Williamsport Water Co. (The),	1887,	Armstrong Township, Lycoming County,	Has done no work,	
Spangler Water Co. (The),	Aug. 19, 1892,	Spangler Village, Cambria County,	Merged into Northern Cambria W. Co.,	520
Speers Water Co.,	Oct. 25, 1897,	Speers Borough, Washington County,	Affidavit of dissolution,	
Spragueville Water Supply Co.,	Dec. 26, 1902,	Stroud Township, Monroe County,	Not in operation,	
Spring Brook Water Co.,	July 25, 1884,	Pleasant Valley Borough, Luzerne County,	Active,	443
Spring Brook Water Supply Co. (The),	Mar. 2, 1896,	Luzerne and Lackawanna Counties,	Active,	442
Springdale Township Water Co.,	April 17, 1906,	Springdale Township, Allegheny County,	Sold to Allegheny Valley Water Co.,	114
Springdale Water Co. (The),	Nov. 28, 1898,	Springdale Township, Allegheny County,	Dissolved,	
Springdale Water Co.,	April 27, 1905,	Springdale Township, Allegheny County,	Sold to municipality,	1110
Springfield Consolidated Water Co.,	Jan. 27, 1905,	Abington Township, Montgomery County,	Active,	256
Springfield Water Co.,	Jan. 4, 1886,	Springfield Township, Delaware County,	Active,	258
Spring Garden Water Co. (The),	April 8, 1864,	Reserve Township, Allegheny County,	Not in operation,	1215
Spring Hill Water Co.,	Oct. 31, 1899,	Point Marion Borough, Fayette County,	Active,	
Spring Run Water Co.,	Mar. 25, 1905,	Nescopeck Township, Luzerne County,	Dissolved,	
Springtown Water Co.,	Dec. 2, 1895,	Springtown Village, Bucks County,	Active,	155

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Name	Date of incorporation	Territory covered by charter	Present status	Page
Spring Water Co. of Hopbottom,	Nov. 9, 1899,	Hopbottom Borough, Susquehanna County,	Affidavit of dissolution,	
Spring Water Co. of Kane,	July 5, 1887,	Kane Borough, McKean County,	Active,	913
Standard Water Co.,	Aug. 16, 1900,	Unity Township, Westmoreland County,	Active,	1186
Standard Water Co. of Crafton, Pa.,	Dec. 29, 1892,	Crafton Borough, Allegheny County,	Has done no work,	
State College Water Co. (The),	Aug. 22, 1892,	College Township, Centre County,	Active,	562
Steelton Home Water Co. (The),	Aug. 9, 1892,	Steelton Borough, Dauphin County,	Sold to municipality (dissolved),	822
Steelton Water Co. (The),	May 1, 1884,	Steelton Borough, Dauphin County,	Not in operation,	
Steelton Water Co.,	Mar. 6, 1890,	Steelton Borough, Dauphin County,	Not in operation,	
Steelton Water Co. (The),	Feb. 29, 1892,	Steelton Borough, Dauphin County,	Affidavit of dissolution,	
Stewartstown Water Co.,	Sept. 21, 1904,	Stewartstown Borough, York County,	Active,	824
Stewart Water Co.,	Nov. 11, 1901,	North Huntingdon Township, Westmoreland County	Merged into Trafford Water Co.,	1223
Stockdale Water Co.,	April 22, 1897,	Stockdale, Washington County,	Has done no work,	
Stockertown Spring Water Co.,	Mar. 3, 1903,	Stockertown Borough, Northampton County	Has done no work,	
Stone Hill Water Co.,	Oct. 18, 1905,	Rouseville Borough, Venango County,	Active,	931
Stony Creek Water Co.,	Sept. 7, 1888,	Moxham, Cambria County,	Sold to Johnstown Water Co.,	1066
Stowe Township Water Co.,	Feb. 24, 1899,	Stowe Township, Allegheny County,	Sold to Monongahela Water Co.,	
Stowe Water Co. (The),	Jan. 17, 1887,	Stowe Township, Allegheny County,	Has done no work,	
Stowe Water Co.,	June 6, 1904,	Stowe Township, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Stowe Water Co.,	April 18, 1901,	Stowe Township, Allegheny County,	Has done no work,	
Stoyestown Water Co.,	April 17, 1906,	Stoyestown Borough, Somerset County,	Active,	1111
Strafford Water Co. (The),	April 13, 1893,	Tredyffrin Township, Chester County,	Affidavit of dissolution,	
Strasburg Water Co. (The),	Sept. 9, 1895,	Strasburg Borough, Lancaster County,	Sold to municipality (dissolved,	8
Strode Water Supply Co.,	April 14, 1905,	Granville Township, Mifflin County,	Sold to Greenmount Water Supply Co.,	809
Stroudsburg Water Co.,	Aug. 25, 1876,	Stroudsburg, Monroe County,	Active,	84
Stroudsburg Water Supply Co.,	Mar. 15, 1905,	Stroudsburg Borough, Monroe County,	Active,	84
Suburban Water Co. (The),	May 23, 1892,	Lower Merion Township, Montgomery County	Not in operation,	
Suburban Water Co. of Allegheny Co., Pa.,	Mar. 7, 1887,	Verona Borough, Allegheny County,	Active,	1088
Suburban Water Co. of the Village of Cranberry	May 31, 1895,	Cranberry Village, Luzerne County,	Not in operation,	
Summerhill Borough Water Co.,	Nov. 9, 1900,	Summerhill Borough, Cambria County,	Sold to Cambria Water Supply Co.,	505
Summerhill Water Supply Co.,	Mar. 11, 1905,	Summerhill Township, Cambria County,	Sold to Mountain Springs Water Co., now Summit Water Supply Co.	1090

Summit Hill Water Co.,	Oct. 4, 1876,	Summit Hill Borough, Carbon County,	Active,	157
Summit Water Co. (The),	Jan. 15, 1894,	Loyalsock Township, Lycoming County,	Has done no work,	
Summit Water Supply Co.,	Nov. 15, 1899,	Lilly Borough, Cambria County,	Active,	1078
Sunbury Water Co. (The),	Oct. 23, 1879,	Sunbury Borough, Northumberland County,	Has done no work,	
Sunbury Water Co. (The),	Mar. 2, 1883,	Sunbury Borough, Northumberland County,	Active,	637
Superior Water Co.,	May 20, 1904,	Ingram Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Susquehanna Township Water Co.,	Dec. 3, 1907,	Susquehanna Township, Dauphin County,	Controlled by Paxtang Consolidated Water Co.	775
Susquehanna Water Co. (The),	Aug. 17, 1874,	Susquehanna, Susquehanna County,	Leased to Canawacta Water Supply Co.,	341
Susquehanna Water Co. (The),	Sept. 14, 1885,	Wilkes-Barre, Luzerne County,	Affidavit of dissolution,	
Susquehanna Water Co. (The),	Jan. 4, 1893,	Plains Township, Luzerne County,	Affidavit of dissolution,	
Susquehanna Water Co.,	Aug. 11, 1898,	Susquehanna Township, Cambria County,	Active,	
Susquehanna Water Co.,	Mar. 5, 1902,	Scranton City, Lackawanna County,	Owned by Scranton Gas and Water Co.,	420
Susquehanna Water Supply Co. (The),	Dec. 6, 1897,	Camp Hill Borough, Cumberland County,	Merged into Riverton Cons. Water Co.,	798
Swatara Water Co. (The),	Oct. 11, 1898,	Swatara and Lower Swatara Townships, Dauphin County	Affidavit of dissolution,	
Swiftwater Water and Power Co.,	April 14, 1902,	Swiftwater Village, Monroe County,	Active,	85
Tarentum Water Co. (The),	Dec. 1, 1887,	Tarentum Borough, Allegheny County,	Merged into Tarentum Water Co.,	1114
Tarentum Water Co.,	May 30, 1906,	Merger, Allegheny County,	Sold to Allegheny Valley Water Co.,	1114
Tatamy Water Co.,	Sept. 18, 1907,	Tatamy Borough, Northampton County,	Dissolved,	
Taxpayers Water Co.,	June 16, 1899,	Carlisle Borough, Cumberland County,	Affidavit of dissolution,	
Taylorville Water Co. (The),	Oct. 26, 1886,	Taylorville Village, Lackawanna County,	Active,	443
Telford Water Co.,	Nov. 1, 1910,	West Telford Borough, Montgomery County	Merged into Telford Water Co.,	289
Telford Water Co.,	Sept. 12, 1911,	Merger, Montgomery and Bucks Counties,	Active,	288
Temple Water Co. (The),	Feb. 11, 1886,	Temple Village, Berks County,	Has done no work,	
Third Ward Water Works, Franklin, Venango County, Pa.	Aug. 14, 1879,	Franklin City (Third Ward) and Sugar Creek Township, Venango County	Affidavit of dissolution,	
Thompson Borough Water Co. (The),	July 24, 1891,	Thompson Borough, Susquehanna County,	Active,	343
Thornburg Water Co.,	June 16, 1904,	Robinson Township, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Three Springs Water Co. (The),	Dec. 13, 1910,	Three Springs Borough, Huntingdon County,	Active,	715
Throop Water Co. (The),	Nov. 25, 1892,	Dickson City Borough, Lackawanna County	Affidavit of dissolution,	
Tiadaghton Water Co.,	Nov. 8, 1901,	Pine Creek Township, Clinton County,	Active,	583
Tidioute Water Co.,	June 12, 1873,	Tidioute Borough, Warren County,	Active,	939
Tinicum Water Co. (The),	Mar. 7, 1892,	Tinicum Township, Delaware County,	Sold to Springfield Water Co.,	258
Tioga Water Works Co.,	Nov. 4, 1887,	Tioga Borough, Tioga County,	Active,	344
Tionesta Water Supply Co. (The),	Oct. 24, 1892,	Tionesta Borough, Forest County,	Active,	940
Tipton Water Co.,	Feb. 12, 1903,	Antis Township, Blair County,	Active,	680
Titusville Gas and Water Co.,	Feb. 17, 1865,	Titusville, Crawford County,	Sold to Titusville Gas Co.,	
Titusville Water Co.,	Mar. 21, 1885,	Titusville, Crawford County,	Never operated,	
Toby Creek Water Co. (The),	Dec. 23, 1890,	Luzerne Borough, Luzerne County,	Active,	443

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Name	Date of incorporation	Territory covered by charter	Present status	Page
Tomhicken Water Co.,	June 19, 1893,	Black Creek Township, Luzerne County,	Leased by Wyoming Water Supply Co.,	388
Towanda Gas and Water Co.,	April 13, 1859,	Towanda, Bradford County,	Not in operation,	347
Towanda Water Co.,	Mar. 31, 1851,	Towanda, Bradford County,	Has done no work,	347
Towanda Water Works Co.,	Dec. 1, 1879,	Towanda Borough, Bradford County,	Active,	345
Tower City Water Works Co. (The),	May 15, 1893,	Tower City, Schuylkill County,	Not in operation,	
Town Water Co.,	Nov. 18, 1902,	Bloomsburg, Columbia County,	Dissolved,	
Trafford Water Co.,	Nov. 11, 1901,	Patton Township, Allegheny County,	Merged into Trafford Water Co.,	1223
Trafford Water Co.,	Jan. 4, 1902,	Merger, Allegheny and Westmoreland Counties	Active,	1223
Tredyffrin Water Co.,	July 23, 1895,	Tredyffrin Township, Chester County,	Sold to Berwyn Water Co.,	258
Tremont Water and Gas Co.,	June 10, 1870,	Tremont, Schuylkill County,	Active,	826
Trevorton Water Supply Co.,	Mar. 30, 1906,	Zerbe Township, Northumberland County,	Active,	640
Trevose Manor Spring Water Co.,	Dec. 8, 1907,	Bensalem Township, Bucks County,	Not in operation,	
Tri-Cities Water Co.,	1897,	Monessen, Charleroi, North Charleroi and Donora Boroughs, Washington and Westmoreland Counties	Active,	1202
Tripp Water Supply Co.,	Mar. 11, 1905,	Brady Township, Huntingdon County,	Has done no work,	
Trotter Water Co.,	Oct. 29, 1888,	Dunbar Township, Fayette County,	Merged into Trotter Water Co.,	1165
Trotter Water Co.,	Sept. 14, 1905,	Merger, Fayette and Westmoreland Counties	Active,	1165
Trout Creek Water Supply Co.,	Nov. 16, 1900,	Coolbaugh Township, Monroe County,	Dissolved,	
Trout Lake Water Supply Co.,	Sept. 13, 1900,	Jackson Township, Monroe County,	Not in operation,	
Trout Run Water Co. (The),	Aug. 20, 1894,	Duncannon Borough, Perry County,	Active,	757
Trout Run Water Supply Co.,	Mar. 11, 1905,	Logan Township, Huntingdon County,	Has done no work,	808
Troy Water Co. of Troy, Bradford County,	Dec. 30, 1878,	Troy Borough, Bradford County,	Sold to municipality,	348
Tunkhannock Water Co.,	April 22, 1858,	Tunkhannock, Wyoming County,	Active,	349
Tunkhannock Water Supply Co.,	Sept. 17, 1900,	Tunkhannock Township, Monroe County,	Not in operation,	
Turkeyfoot Water Company (The),	Mar. 25, 1881,	Markleton, Somerset County,	Has done no work,	
Turkeyfoot Water Supply Co.,	Sept. 4, 1902,	Upper Turkeyfoot Township, Somerset County	Merged into Western Water Supply Co.,	1366
Tuscarora Water Co.,	Feb. 11, 1856,	Tuscarora, Schuylkill County,	Not in operation,	
Two Lick Creek Water Co.,	Feb. 10, 1903,	Green Township, Indiana County,	Has done no work,	
Tylersville Water Co.,	April 13, 1859,	Tylersville, Clinton County,	Not in operation,	
Tylersville Water Supply Co.,	Oct. 23, 1902,	Tylersville Village, Clinton County,	Active,	564
Tyrone City Water Co.,	Mar. 25, 1858,	Tyrone City, Blair County,	Has done no work,	
Tyrone Gas and Water Co.,	Mar. 10, 1865,	Tyrone, Blair County,	Active,	686

Tyrone Water Storage Co.,	Mar. 11, 1905,	Tyrone Township, Blair County,	Owned by Tyrone Gas and Water Co.,	687
Uniondale Water Co.,	Jan. 23, 1893,	Uniondale Borough, Susquehanna County,	Owned by Consolidated Water Supply Co.	
Union Township Water Co.,	Mar. 9, 1903,	Union Township, Washington County,	Affidavit of dissolution,	420
Union Township Water Co. of Union County,	May 3, 1907,	Union Township, Union County,	Dissolved,	
Uniontown Gas and Water Co.,	Mar. 25, 1859,	Uniontown, Fayette County,	Never operated,	
Uniontown Water Co. (The),	Mar. 21, 1883,	Uniontown Borough, Fayette County,	Active,	1224
Uniontown Water Co. of Dauphin County,	April 15, 1851,	Uniontown and Pillow, Dauphin County,	Active,	641
Union Water Co.,	May 14, 1890,	Beaver Falls Borough, Beaver County,	Leased to Beaver Valley Water Co.,	1256
Union Water Co.,	Jan. 11, 1892,	Mansfield Borough, Allegheny County,	Has done no work,	
Union Water Co. of New Berlin,	Jan. 2, 1907,	New Berlin Borough, Union County,	Active,	633
Union Water Supply Co. of Oneida Township,	April 14, 1905,	Oneida Township, Huntingdon County,	Sold to Trout Run Water Supply Co.,	809
Unity Township Water Co.,	June 2, 1884,	Unity Township, Westmoreland County,	Sold to Greensburg Water Co.,	
Unity Water Co.,	Oct. 24, 1900,	Penn Township, Allegheny County,	Active,	1088
University Water Co.,	Feb. 5, 1907,	Ferguson Township, Centre County,	Active,	562
Upland Water Co. (The),	June 27, 1885,	Upland Borough, Delaware County,	Sold to New Chester Water Co.,	199
Upper Darby Water Co.,	Jan. 11, 1886,	Upper Darby Township, Delaware County,	Dissolved,	
Upper Dublin Water Co.,	June 20, 1898,	Upper Dublin Township, Montgomery County	Sold to N. Springfield Water Co.,	258
Upper Dublin Water Co.,	Nov. 14, 1900,	Upper Dublin Township, Montgomery County	Active,	190
Upper Gwynedd Water Co.,	Dec. 7, 1900,	Upper Gwynedd Township, Montgomery County	Active,	236
Upper Mauch Chunk Water Co.,	Oct. 26, 1872,	Upper Mauch Chunk, Carbon County,	Active,	135
Upper Merion Water Co.,	May 25, 1887,	Upper Merion Township, Montgomery County	Affidavit of dissolution,	
Upper Nazareth Water Co.,	June 9, 1902,	Upper Nazareth Township, Northampton County	Affidavit of dissolution,	
Valley Consolidated Water Co.,	Dec. 7, 1893,	Allegheny County,	Sold to Ohio Valley Water Co.,	1286
Valley Forge Water Co. (The),	April 13, 1893,	Upper Merion Township, Montgomery County	Affidavit of dissolution,	
Valley Point Water Supply Co.,	Mar. 11, 1905,	Shirley Township, Huntingdon County,	Sold to Greenmount Water Supply Co.,	809
Valley Supply Water Co.,	Aug. 11, 1887,	Carbondale City, Lackawanna County,	Affidavit of dissolution,	
Valley View Water Co.,	Mar. 10, 1882,	Valley View Village, Schuylkill County,	Affidavit of dissolution,	
Valley Water Co.,	May 14, 1889,	Penn Township, Allegheny County,	Merged into Pennsylvania Water Co.,	1125
Valley Water Co.,	July 6, 1889,	Duryea Borough, Luzerne County,	Active,	443
Valley Water Co.,	Feb. 10, 1890,	Rochester Borough, Beaver County,	Sold to Union Water Co.,	1256
Valley Water Co. of Emsworth,	Oct. 15, 1896,	Emsworth Borough, Allegheny County,	Has done no work,	
Valley Water Co. of Rochester,	Mar. 31, 1902,	Rochester Borough, Beaver County,	Leased by Beaver Valley Water Co.,	1256
Vandergrift Water Co.,	Sept. 27, 1895,	Allegheny Township, Westmoreland County,	Active,	1117
Vandling Water Co. (The),	Aug. 7, 1893,	Fell Township, Lackawanna County,	Owned by Consolidated Water Supply Co.	420

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
Vanport Water Co.,	Feb. 26, 1902,	Borough Township, Beaver County,	Affidavit of dissolution,	
Venango Water Co.,	April 4, 1863,	Franklin, Venango County,	Sold to municipality (dissolved),	958
Vermont Water Co.,	July 22, 1904,	Avalon Borough, Allegheny County,	Sold to Ohio Valley Water Co.,	1286
Versailles Water Co. (The),	Jan. 12, 1893,	Versailles Township, Allegheny County,	Not in operation,	
Veteran Water Co.,	Jan. 10, 1905,	Mt. Pleasant Township, Westmoreland County	Active,	1154
Veteran Water Supply Co.,	Jan. 10, 1905,	Hempfield Township, Westmoreland County,	Active,	1154
Viaduct Water Supply Co.,	Aug. 31, 1904,	East Taylor Township, Cambria County,	Active,	
Villa Nova Water Co.,	July 23, 1895,	Radnor Township, Delaware County,	Sold to Berwyn Water Co.,	257
Vintondale Water Co.,	Aug. 27, 1894,	Vintondale, Cambria and Indiana Counties.	Dissolved,	
Wallace Run Water Co.,	Nov. 28, 1906,	Luzerne Township, Fayette County,	Dissolved,	
Wallonpaupack Water Co.,	Oct. 15, 1897,	Hawley Borough, Wayne County,	Affidavit of dissolution,	
Wallonpaupack Water Co.,	June 9, 1899,	Jefferson Township, Lackawanna County,	Has done no work,	
Wallingford Water Co (The),	Dec. 22, 1884,	Nether Providence Township, Delaware County	Active,	219
Walnut Grove Water Co. (The),	Aug. 23, 1910,	Stony Creek Township, Cambria County,	Active,	1066
Walnutport Water Co.,	Oct. 29, 1902,	Walnutport Village, Northampton County,	Dissolved,	
Waltersburg Water Co.,	Nov. 18, 1903,	Menallen Township, Fayette County,	Affidavit of dissolution,	
Warren Gas and Water Co.,	Mar. 8, 1869,	Warren, Warren County,	Never operated,	
Warren Water Co. (The),	June 27, 1881,	Warren Borough, Warren County,	Active,	944
Warriors Mark Water Co.,	Mar. 5, 1852,	Warriors Mark, Huntingdon County,	Active,	688
Warrior Run Water Co. (The),	Jan. 16, 1896,	Warrior Run Borough, Luzerne County,	Affidavit of dissolution,	
Washington Township Water Co.,	Jan. 10, 1905,	Washington Township, Fayette County,	Merged into Fayette City Water Co.,	1180
Washington Water Co.,	Feb. 14, 1882,	Washington Borough, Washington County,	Never operated,	
Washington Water Supply Co.,	May 4, 1903,	Washington Township, Lehigh County,	Active,	124
Water Co. of Manchester Township (The),	July 20, 1896,	Manchester Township, York County,	Sold to York Water Co.,	831
Water Co. of Spring Garden Township (The),	July 20, 1896,	Spring Garden Township, York County,	Sold to York Water Co.,	831
Water Co. of Springettsbury Township,	Dec. 8, 1906,	Springettsbury Township, York County,	Controlled by York Water Co.,	831
Water Co. of West Manchester Township (The)	July 20, 1896,	West Manchester Township, York County,	Sold to York Water Co.,	831
Waterford Water Co.,	Sept. 18, 1907,	Waterford Borough, Erie County,	Active,	946
Water Pipes of Aaronsburg,	Mar. 25, 1809,	Aaronsburg, Centre County,	Not in operation,	
Water Works of Northern Liberties, of Pittsburgh	Mar. 29, 1836,	Northern Liberties of Pittsburgh, Allegheny County	Not in operation,	

Watsontown Water Co. (The),	Mar. 18, 1886,	Watsontown Borough, Northumberland County	Owned by White Deer Mountain Water Co.	587
Waymart Water Co. (The),	May 10, 1893,	Waymart Borough, Wayne County,	Active,	87
Wayne Citizens Water and Supply Co.,	July 19, 1899,	Wayne and Pike Counties,	Merged into Honesdale Consolidated Water Co.	74
Waynesboro Water Co. (The),	July 11, 1882,	Waynesboro Borough, Franklin County,	Active,	856
Waynesburg Water Co.,	May 19, 1886,	Waynesburg, Greene County,	Active,	1226
Wayne Water Works Co.,	Nov. 17, 1891,	Radnor Township, Delaware County,	Sold to N. Springfield Water Co.,	257
Wayne Water Co.,	Nov. 6, 1911,	North Manheim Township, Schuylkill County	Active,	278
Weatherly Water Co.,	Jan. 24, 1882,	Weatherly Borough, Carbon County,	Active,	161
Weaverstown Water Co.,	Mar. 2, 1903,	North Lebanon Township, Lebanon County,	Merged into Weaverstown Water Co., now Lebanon Valley Consolidated Water Supply Co.	782
Weissport Water Co.,	Sept. 26, 1893,	Weissport Borough, Carbon County,	Active,	133
Weldon Water Co.,	June 14, 1909,	Abington Township, Montgomery County,	Sold to Moreland Spring Water Co.,	213
Wellsboro Water Co. (The),	Aug. 4, 1885,	Wellsboro Borough, Tioga County,	Active,	566
Wernersville Water Co. (The),	Sept. 27, 1894,	Wernersville Village, Berks County,	Active,	290
West Berwick Water Supply Co.,	May 26, 1902,	West Berwick Village, Columbia County,	Active,	373
West Bethlehem Water Co.,	Dec. 4, 1901,	West Bethlehem Borough, Lehigh County,	Never operated,	
West Bolivar Water Co.,	Dec. 31, 1900,	Fairfield Township, Westmoreland County,	Active,	1044
West Branch Water Co.,	Nov. 9, 1900,	Summerhill Township, Cambria County,	Sold to Cambria County Water Supply Co.	505
West Conshohocken Water Co. (The),	Sept. 28, 1897,	West Conshohocken Borough, Montgomery County	Active,	292
West Easton Spring Water Co.,	May 2, 1906,	West Easton Borough, Northampton County	Affidavit of dissolution,	
West Easton Water Co.,	Mar. 29, 1910,	West Easton Borough, Northampton County	Not in operation,	68
West Elizabeth Water Co.,	Jan. 23, 1896,	West Elizabeth Borough, Allegheny County,	Sold to Elizabeth Water Co.,	1185
West End Water Co. (The),	Sept. 24, 1896,	Lancaster Township, Lancaster County,	Active,	
West End Water Co.,	Sept. 22, 1904,	Allison Township, Clinton County,	Active,	546
West End Water Co. of West End Borough, Venango County, Pa.	Aug. 5, 1903,	West End Borough, Venango County,	Active,	947
Western Water Co. (The),	Oct. 20, 1891,	Westmoreland County,	Sold to Western Water Supply Co.,	
Western Water Supply Co.,	June 9, 1902,	Westmoreland County,	Merged into Western Water Supply Co.,	
Western Water Supply Co.,	June 24, 1902,	Merger, Fayette and Westmoreland Counties	Merged into Western Water Supply Co.,	
Western Water Supply Co.,	Sept. 23, 1902,	Merger, Fayette, Westmoreland and Somerset Counties	Dissolved,	
Westfield Water Co. (The),	Sept. 2, 1890,	Westfield Borough, Tioga County,	Has done no work,	
West Grove Water Co.,	June 15, 1904,	West Grove Borough, Chester County,	Active,	293

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
West Hazleton Water Co. (The),	Jan. 9, 1893,	West Hazleton Borough, Luzerne County,	Has done no work,	
West Homestead Water Co.,	Oct. 15, 1903,	West Homestead Borough, Allegheny County	Affidavit of dissolution,	
West Houtzdale Water Co.,	Nov. 7, 1908,	Woodward Township, Clearfield County,	Active,	509
West Indiana Water Co. (The),	Jan. 25, 1884,	West Indiana Borough, Indiana County,	Has done no work,	
West Kittanning Water Co.,	June 3, 1901,	Kittanning Borough, Armstrong County,	Sold to Armstrong Water Co.,	990
West Lansdale Improvement Water Co.,	June 13, 1906,	Upper Gwynedd Township, Montgomery County	Not in operation,	
West Liberty Water Co.,	May 20, 1904,	West Liberty Borough, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
West Milton Water Co.,	Sept. 28, 1906,	Kelly Township, Union County,	Affidavit of dissolution,	
Westmoreland Water Co. (The), (formerly Westmoreland Water Co. of Ludwick Borough, Westmoreland County, Pa.)	Sept. 24, 1886,	Ludwick Borough, Westmoreland County,	Active,	1185
Westmoreland Water Co. of Greensburg Borough, Westmoreland County, Pa. (The)	Sept. 24, 1886,	Greensburg Borough, Westmoreland County	Sold to Westmoreland Water Co.,	1186
Westmoreland Water Co. of Hempfield Township, Westmoreland County (The)	Sept. 24, 1886,	Hempfield Township, Westmoreland County	Sold to Westmoreland Water Co.,	1186
Westmoreland Water Co of Unity Township, Westmoreland County, Pa. (The)	Sept. 24, 1886,	Unity Township, Westmoreland County,	Sold to Westmoreland Water Co.,	1186
West New Castle Water Co.,	Dec. 17, 1896,	West New Castle Borough, Lawrence County	Merged into City of New Castle Water Co.	1293
West Newton Water Co.,	Feb. 5, 1895,	West Newton Borough, Westmoreland County	Not in operation,	
West Newton Water Co.,	Jan. 19, 1898,	West Newton Borough, Westmoreland County	Affidavit of dissolution,	
West Newton Water Co. of West Newton,	Dec. 9, 1897,	West Newton Borough, Westmoreland County	Active,	1228
West Norriton Water Co.,	April 29, 1912,	West Norriton Township, Montgomery County	Active,	233
West Pittsburgh Water Co.,	Dec. 12, 1902,	Taylor Township, Lawrence County,	Active,	1310
West Pittston Water Co.,	June 2, 1871,	West Pittston, Luzerne County,	Not in operation,	
West Pottsgrove Water Co.,	April 27, 1909,	West Pottsgrove Township, Montgomery County	Active,	265
West Reading Water Co.,	May 17, 1883,	Spring Township, Berks County,	Active,	294
West Sadsbury Water Co.,	Jan. 21, 1901,	West Sadsbury Township, Chester County,	Has done no work,	
West Salem Water Supply Co.,	Aug. 12, 1903,	Salem Township, Luzerne County,	Active,	373
West Shore Water Co.,	Feb. 2, 1910,	East Pennsburg Township, Cumberland County	Controlled by Riverton Consolidated Water Co.	798
West Side Water Co.,	April 13, 1888,	Dorranceton Borough, Luzerne County,	Active,	443

West Side Water Co.,	July 6, 1889,	West Pittston Borough, Luzerne County,	Active,	443
West Side Water Co.,	July 1, 1890,	Bridgewater Borough, Beaver County,	Sold to Valley Water Co.,	
West Side Water Co.,	Nov. 21, 1899,	Elco, Roscoe, Stockdale and Speers Boroughs, and Allen Township, Washington County	Affidavit of dissolution,	
West Side Water Co.,	Mar. 31, 1902,	Bridgewater Borough, Beaver County,	Leased by Beaver Valley Water Co.,	1256
West Township Water Co.,	Jan. 10, 1905,	West Township, Huntingdon County,	Not in operation,	
West Washington Water Co.,	Feb. 25, 1901,	West Washington Borough, Washington County	Sold to Citizens Water Co. of Washington	1308
Westwood Water Co.,	Jan. 17, 1905,	Union Township, Allegheny County,	Sold to S. Pittsburgh Water Co.,	1164
Wheatfield Water Supply Co.,	Mar. 11, 1905,	Wheatfield Township, Perry County,	Sold to Nekoda Water Supply Co.,	809
Wheatland Water Co.,	May 12, 1902,	Wheatland Borough, Mercer County,	Never operated,	
Whitaker Water Co.,	Sept. 5, 1913,	Whitaker Borough, Allegheny County,	Active,	1161
White Deer Creek Water Supply Co.,	Aug. 11, 1897,	Kelly Township, Union County,	Owned by White Deer Mountain Water Co.	587
White Deer Mountain Water Co.,	Sept. 27, 1899,	White Deer Township, Union County,	Active,	586
White Deer Water Supply Co.,	July 31, 1895,	Northumberland County,	Not in operation,	
Whitehall Crane Water Co.,	June 25, 1901,	Whitehall Township, Lehigh County,	Merged into Clear Springs Water Co.,	116
Whitehall Township Water Co.,	June 26, 1901,	Whitehall Township, Lehigh County,	Affidavit of dissolution,	
Whitehall Water Co.,	Mar. 7, 1893,	Whitehall, Lehigh County,	Sold to Clear Springs Water Co.,	
White Hall Water Supply Co.,	Mar. 11, 1905,	Franklin Township, Huntingdon County,	Sold to Trout Run Water Supply Co.,	809
White Haven Water Co.,	Feb. 27, 1885,	White Haven, Luzerne County,	Active,	162
White Marsh Water Co.,	Dec. 24, 1894,	White Marsh Township, Montgomery County	Affidavit of dissolution,	
White Township Water Co.,	June 17, 1902,	White Township, Beaver County,	Not in operation,	
Whitfield Water Co.,	June 9, 1902,	Nazareth Borough, Northampton County,	Affidavit of dissolution,	
Whitney Water Co.,	Feb. 7, 1898,	Unity Township, Westmoreland County,	Affidavit of dissolution,	
Wildmere Water Co.,	Mar. 5, 1901,	Lehman Township, Pike County,	Affidavit of dissolution,	
Wildwood Water Co.,	Aug. 27, 1901,	Cresson Township, Cambria County,	Leased by Cambria County Water Supply Co.	505
Wilkes-Barre Water and Insurance Co.,	May 5, 1832,	Wilkes-Barre, Luzerne County,	Has done no work,	
Wilkes-Barre Water Co.,	Feb. 12, 1850,	Wilkes-Barre, Luzerne County,	Active,	443
Wilkinsburg Water Co.,	Dec. 5, 1901,	Wilkinsburg Borough, Allegheny County,	Not in operation,	
Wilkins Township Water Co.,	April 4, 1901,	Wilkins Township, Allegheny County,	Not in operation,	
Wilkins Water Co. (The),	Jan. 17, 1887,	Wilkins Township, Allegheny County,	Has done no work,	
Williamsburg Water Co.,	Dec. 19, 1895,	Williamsburg Borough, Blair County,	Affidavit of dissolution,	
Williamsport Water Co.,	April 18, 1853,	Williamsport, Lycoming County,	Merged into Williamsport Water Co.,	592
Williams Valley Water Co.,	Jan. 11, 1892,	Williamstown Borough, Dauphin County,	Active,	643
Willistown Water Co.,	July 23, 1895,	Willistown Township, Chester County,	Sold to Berwyn Water Co.,	258
Willow Grove Water Co. (The),	June 18, 1897,	Abington Township, Montgomery County,	Not in operation,	
Willow Grove Water Supply Co.,	Nov. 18, 1903,	Moreland Township, Montgomery County,	Dissolved,	

TABLE 17—Continued

Name	Date of incorporation	Territory covered by charter	Present status	Page
Wilmerding Water Co.,	Nov. 11, 1901,	Wilmerding Borough, Allegheny County,	Merged into Trafford Water Co.,	1223
Wilmore Water Co.,	Aug. 1, 1906,	Wilmore Borough, Cambria County,	Dissolved,	
Windber Water and Power Co.,	April 26, 1900,	Paint and Shade Townships, Somerset County	Active,	1105
Winburne Water Co.,	June 2, 1903,	Cooper Township, Clearfield County,	Active,	522
Wind Gap Water Co.,	Sept. 1, 1899,	Wind Gap Borough, Northampton County,	Merged into Blue Mountain Consolidated Water Co.	139
Windsor Water Co.,	Aug. 19, 1889,	Hamburg Borough, Berks County,	Active,	207
Winslow Water Co.,	Feb. 15, 1905,	Winslow Township, Jefferson County,	Not in operation,	
Winton Water Co.,	Jan. 17, 1889,	Winton Borough, Lackawanna County,	Active,	420
Womelsdorf Consolidated Water Co.,	Dec. 5, 1904,	Merger, Berks County,	Active,	295
Womelsdorf Water Co.,	April 10, 1826,	Womelsdorf, Berks County,	Not in operation,	
Womelsdorf Water Co. (The),	May 29, 1895,	Womelsdorf Borough, Berks County,	Merged into Womelsdorf Consolidated Water Co.	296
Woodland Water Co.,	Aug. 12, 1903,	Brownsville Township, Fayette County,	Has done no work,	
Woodlawn Water Co.,	Mar. 2, 1909,	Woodlawn Borough, Beaver County,	Active,	1311
Woods Water Co.,	July 1, 1895,	Crafton Borough, Allegheny County,	Affidavit of dissolution,	
Woodward Township Water Co.,	June 9, 1913,	Woodward Township, Clinton County,	Active,	547
Woodward Water Co.,	1872,	Woodward, Centre County,	Active,	644
Woodward Water Co.,	April 23, 1903,	Cherry Hill Township, Indiana County,	Charter held by Cambria County Water Supply Co.	505
Wrightsville Water Co. (The),	June 16, 1892,	Wrightsville Borough, York County,	Affidavit of dissolution,	
Wrightsville Water Supply Co.,	June 16, 1897,	Wrightsville Borough, York County,	Active,	829
Wright Township Water Co.,	June 1, 1894,	Wright Township, Luzerne County,	Active,	
Wyalusing Water Co.,	Sept. 11, 1893,	Wyalusing Borough, Bradford County,	Active,	351
Wyncote Water Co.,	Nov. 8, 1900,	Cheltenham Township, Montgomery County	Dissolved,	
Wyoming Borough Water Co. (The),	Oct. 7, 1886,	Wyoming Borough, Luzerne County,	Affidavit of dissolution,	
Wyoming Valley Gas and Water Co.,	April 3, 1889,	Wilkes-Barre, Luzerne County,	Has done no work,	
Wyoming Valley Water Co. (The),	Sept. 20, 1883,	Wyoming and Lackawanna Valleys, Luzerne County	Dissolved,	
Wyoming Valley Water Supply Co.,	April 30, 1900,	Luzerne County,	Active,	398
Wyoming Water Co.,	July 6, 1889,	Wyoming Borough, Luzerne County,	Active,	443
Wyomissing Spring Water Co.,	Jan. 13, 1902,	Spring Township, Berks County,	Active,	283

Yardley Water and Power Co.,	Dec. 19, 1900,	Yardley Borough, Bucks County,	Active,	164
Yatesville Borough Water Co.,	July 16, 1901,	Yatesville Borough, Luzerne County,	Active,	443
Yeadon Water Co. (The),	April 17, 1894,	Yeadon Borough, Delaware County,	Not in operation,	
Yellow Creek Water Co.,	Feb. 10, 1903,	Cherryhill Township, Indiana County,	Has done no work,	
Yellow Water Co.,	Sept. 18, 1907,	Rostraver Township, Westmoreland County	Merged into Belle Vernon Water Co.,	1152
Yoe Water Co.,	June 20, 1899,	Yoe Borough, York County,	Merged into York County Consolidated Water Co.	751
York Borough Water Co.,	April 16, 1836,	York, York County,	Not in operation,	
York County Consolidated Water Co.,	April 1, 1909,	Merger, York County,	Active,	750
York Water Co.,	Feb. 8, 1816,	York, York County,	Active,	830
Youghgahela Water Co.,	July 11, 1905,	Merger, Fayette County,	Merged into Trotter Water Co.,	1165
Youghiogheny Water Co.,	Oct. 27, 1881,	Fayette and Westmoreland Counties,	Merged into Trotter Water Co.,	1165
Yough Valley Water Co.,	Dec. 10, 1896,	Allegheny County,	Not in operation,	
Yough Water Co. (The),	Oct. 16, 1895,	Connellsville Township, Fayette County,	Has done no work,	
Youngsville Borough Water Co.,	July 15, 1889,	Youngsville Borough, Warren County,	Affidavit of dissolution,	
Zerbe Run Water Co.,	June 24, 1904,	Zerbe Township, Northumberland County,	Never operated,	232

TABLE NO 18

Consolidation of Water Companies by Merger or Purchase of Property and Franchises

Holding company		Constituent companies			
Name	Incorporated for	Name	Incorporated for	Form of consolidation	Date of consolidation
Allegheny Valley Water Co.,	Cheswick Boro., Allegheny County	Harmar Twp. Water Co.,	Harmar Twp., Allegheny County	Purchased,	Aug. 13, 1906
		Springdale Twp. Water Co.,	Springdale Twp., Allegheny County	Purchased,	Aug. 13, 1906
		Tarentum Water Co.,	Merger, Allegheny County,	Purchased,	Aug. 13, 1906
Archbald Water Co.,	Archbald Village, Luzerne County	Peckville Water Supply Co.,	Blakely Twp., Lackawanna County	Purchased,	Oct. 24, 1894
Armstrong Water Co.,	Kittanning Boro., Armstrong County	Citizens Water Co. of Kittanning	Kittanning Boro., Armstrong County	Purchased,	April 29, 1907
		Nealton Water Co.,	Rayburn Twp., Armstrong County	Purchased,	April 29, 1907
		Manor Twp. Water Co.,	Manor Twp., Armstrong County	Purchased,	April 29, 1907
		Manorville Water Co.,	Manorville Boro., Armstrong County	Purchased,	April 29, 1907
		Rayburn Water Co.,	Rayburn Twp., Armstrong County	Purchased,	April 29, 1907
		West Kittanning Water Co.,	Kittanning Boro., Armstrong County	Purchased,	April 29, 1907
Beaverdale Water Co., The Beaverdale Water Co. was sold to the Mountain Springs Water Co., now the Summit Water Supply Co., on Aug. 30, 1905 (see Summit Water Supply Co.)	Merger, Cambria County,	Adams Water Co.,	Adams Twp., Cambria County	Merged,	Oct. 18, 1904
		Beaverdale Water Co.,	Summerhill Twp., Cambria County	Merged,	Oct. 18, 1904
Belle Vernon Water Co.,	Merger, Fayette & Westmoreland Counties	Belle Vernon Water Co.,	Belle Vernon Boro., Fayette County	Merged,	May 4, 1908
		Blue Water Co.,	North Belle Vernon Boro., Westmoreland County	Merged,	May 4, 1908
		Red Water Co.,	Washington Twp., Fayette County	Merged,	May 4, 1908

		Yellow Water Co.,	Rostraver Twp., Westmoreland County	Merger,	May 4, 1908
Ben Avon Valley Water Co.,	Merger, Allegheny County,	Ben Avon Valley Water Co.,	Ben Avon Boro., Allegheny County	Merged,	May 27, 1903
		Emsworth Valley Water Co.	Emsworth Boro., Allegheny County	Merged,	May 27, 1903
Benwood Water Co., The Benwood Water Co. was sold to the Ohio Valley Water Co. on June 28, 1904. (See Ohio Valley Water Co.)	Stowe Twp., Allegheny County	Fleming Park Water Co.,	Fleming Park, Allegheny County	Purchased,	May 16, 1904
Berwyn Water Co., The Berwyn Water Co. was sold to the North Springfield Water Co. on Oct. 13, 1899. (See North Springfield Water Co.)	Easttown Twp., Chester County	East Whiteland Water Co.,	East Whiteland Twp., Chester County	Purchased,	July 29, 1895
		Schuylkill Twp. Water Co.,	Schuylkill Twp., Chester County	Purchased,	June 24, 1898
		Tredyffrin Water Co.,	Tredyffrin Twp., Chester County	Purchased,	July 29, 1895
		Villa Nova Water Co.,	Radnor Twp., Delaware County	Purchased,	July 29, 1895
		Willistown Water Co.,	Willistown Twp., Chester County	Purchased,	July 29, 1895
Bethlehem City Water Co.,	Bethlehem Twp., Northampton County	Bethlehem Consolidated Water Co.	Merger, Lehigh & Northampton Counties	Purchased,	Dec. 2, 1903
Bethlehem Consolidated Water Co., The Bethlehem Consolidated Water Co. was sold to the Bethlehem City Water Co. on December 2, 1903. (See Bethlehem City Water Co.)	Merger, Lehigh and Northampton Counties	Bethlehem Consolidated Water Co.	Bethlehem Twp., Northampton County	Merged,	April 18, 1902
		Bethlehem South Gas and Water Co.	South Bethlehem Boro., Salisbury, Saucon & Hanover Twps., Lehigh & Northampton Counties	Merged,	April 18, 1902
		Mountain Water Co.,	South Bethlehem Boro., Northampton County	Merged,	April 18, 1902
Bethlehem Water Co.,	Lehigh and Northampton Counties	Bethlehem City Water Co.,	Bethlehem Twp., Northampton County	Purchased,	Oct. 22, 1914
		Hanover Water Co.,	Salisbury & Lehigh Twps., Lehigh County	Purchased,	Oct. 22, 1914
Blair Gap Water Supply Co.,	Merger, Blair County,	Blue Knob Water Supply Co.	Juniata Twp., Blair County,	Merged,	Jan. 30, 1905
		Glen Water Supply Co.,	Logan Twp., Blair County,	Merged,	Jan. 30, 1905
		Glenfield Water Supply Co.,	Allegheny Twp., Blair County	Merged,	Jan. 30, 1905
		Antis Water Co.,	Antis Twp., Blair County,	Purchased,	Sept. 13, 1905
		Belvoir Water Co.,	Antis Twp., Blair County,	Purchased,	Oct. 25, 1905

TABLE NO. 18—Continued

Holding company		Constituent companies			
Name	Incorporated for	Name	Incorporated for	Form of consolidation	Date of consolidation
Blue Mountain Consolidated Water Co.	Merger, Northampton County	Nazareth Water Co.,	Nazareth Boro., Northampton County	Merged,	Dec. 9, 1902
		Pen Argyle Water Co.,	Pen Argyle Boro., Northampton County	Merged,	Dec. 9, 1902
		Wind Gap Water Co.,	Wind Gap Boro., Northampton County	Merged,	Dec. 9, 1902
Branch Water Co.,	Merger, Indiana County,	Branch Water Co.,	Green Twp., Indiana County,	Merged,	Mar. 18, 1903
		Penn Run Water Co.,	Cherryhill Twp., Indiana County	Merged,	Mar. 18, 1903
Brownsville Water Co.,	Merger, Fayette and Washington Counties	Bridgeport Water Co.,	Bridgeport Boro., Fayette County	Merged,	Sept. 3, 1901
		Brownsville Water Co.,	Brownsville Boro., Fayette County	Merger,	Sept. 3, 1901
		Consolidated Water Co.,	Fayette & Washington Counties	Merged,	Sept. 3, 1901
California Water Co.,	California Boro., Washington County	Coal Center Water Co.,	Coal Center Boro., Washington County	Purchased	April 22, 1907
		Coal Center Water Works Co.	Coal Center Boro., Washington County	Purchased,	April 22, 1907
Cambria County Water Supply Co.,	Cambria County,	Allegheny Twp. Water Co.,	Allegheny Twp., Cambria County	Purchased,	Dec. 14, 1900
		Croyle Twp. Water Co.,	Croyle Twp., Cambria County	Purchased,	Nov. 30, 1900
		Summerhill Boro. Water Co.	Summerhill Boro., Cambria County	Purchased,	Nov. 30, 1900
		West Branch Water Co.,	Summerhill Twp., Cambria County	Purchased,	Nov. 30, 1900
Carlisle Water Co.,	Carlisle Boro., Cumberland County	Cumberland Water Co.,	Boiling Springs Village, Cumberland County	Purchased,	Aug. 31, 1896

City of New Castle Water Co.,	Merger, Lawrence County.	City of New Castle Water Co.	New Castle City, Lawrence County	Merged,	Aug. 15, 1902
		Mahoningtown Water Co.,	Mahoningtown Boro., Lawrence County	Merged,	Aug. 15, 1902
		Shenango Water Co.,	Mahoningtown Boro., Lawrence County	Merged,	Aug. 15, 1902
		West New Castle Water Co.,	West New Castle Boro., Lawrence County	Merged,	Aug. 15, 1902
Citizens Water Co.,	Merger, Centre County,	Citizens Water Co. of Philipsburg	Philipsburg Boro., Centre County	Merged,	July 20, 1904
		Philipsburg Water Co.,	Philipsburg Boro., Centre County	Merged,	July 20, 1904
Citizens Water Co. of New Bethlehem,	Merger, Clarion and Armstrong Counties	Citizens Water Co. of New Bethlehem	New Bethlehem Boro., Clarion County	Merged,	Nov. 30, 1904
		Red Bank Water Co.,	South Bethlehem Boro., Armstrong County	Merged,	Nov. 30, 1904
Citizens Water Co. of Scottdale,	Scottdale Boro., Westmoreland County	Everson Water Co.,	Upper Tyrone Twp., Fayette County	Purchased,	Jan. 28, 1907
Citizens Water Co. of Washington,	Washington Boro., Washington County	East Washington Water Co.	East Washington Boro., Washington County	Purchased,	Sept. 14, 1901
		North Washington Water Co.	North Washington Boro., Washington County	Purchased,	Sept. 14, 1901
		South Washington Water Co.	South Washington Boro., Washington County	Purchased,	Sept. 14, 1901
		West Washington Water Co.	West Washington Boro., Washington County	Purchased,	Sept. 14, 1901
Clearfield Water Co.,	Clearfield Boro., Clearfield County	Lawrence Water Co.,	Lawrence Twp., Clearfield County	Purchased,	May 30, 1904
Clear Springs Water Co.,	Merger, Lehigh and Northampton Counties	Allen Crane Water Co.,	Allen Twp., Northampton County	Merged,	April 10, 1902
		Alliance Water Co.,	Alliance Boro., Northampton County	Merged,	April 10, 1902
		Clear Springs Water Co.,	Lehigh and Northampton Counties	Merged,	April 10, 1902
		Coplay Water Co.,	Coplay Boro., Lehigh County	Merged,	April 10, 1902
		Crane Water Co.,	Catasauqua Boro., Lehigh County	Merged,	April 10, 1902
		Hanover Crane Water Co.,	Hanover Twp., Lehigh County	Merged,	April 10, 1902
		Whitehall Crane Water Co.,	Whitehall Twp., Lehigh County	Merged,	April 10, 1902
		Whitehall Water Co.,	Whitehall, Lehigh County,	Merged,	April 10, 1902

TABLE NO. 18—Continued

Holding company		Constituent companies			
Name	Incorporated for	Name	Incorporated for	Form of consolidation	Date of consolidation
Clymer Water Co. of Indiana,	Indiana Boro., Indiana County	Clymer Water Co., of West Indiana	West Indiana Boro., Indiana County	Purchased,	Sept. 2, 1899
Conemaugh & Franklin Water Co.,	Merger, Cambria County,	Conemaugh & Franklin Water Co.	Conemaugh Boro., Cambria County	Merged,	Dec. 18, 1906
		Maple Water Co.,	Franklin Boro., Cambria County	Merged,	Dec. 18, 1906
Connellsville Water Co.,	Connellsville Boro., Fayette County	New Haven Water Co.,	New Haven Boro., Fayette County	Purchased,	Aug. 8, 1892
Consolidated Water Co. of Coudersport	Coudersport Boro., Potter County	Citizens Water Co.,	Coudersport Boro., Potter County	Purchased,	Oct. 16, 1906
Dauphin Consolidated Water Supply Co.	Merger, Dauphin County,	Citizens Water Co. of Dauphin Borough	Dauphin Boro., Dauphin County	Merged,	June 9, 1903
		Citizens Water Co. of Middle Paxton Twp.	Middle Paxton Twp., Dauphin County	Merged,	June 9, 1903
		Citizens Water Co. of Susquehanna Twp.	Susquehanna Twp., Dauphin County	Merged,	June 9, 1903
		Enola Water Co.,	East Pennsboro Twp., Cumberland County	Purchased,	Mar. 13, 1906
		Progress Water Supply Co.,	Susquehanna Twp., Dauphin County	Purchased,	Mar. 13, 1906
East McKeesport Water Co.,	East McKeesport Boro., Allegheny County	Melrose Water Co.,	Wilmerding Boro., Allegheny County	Purchased,	Sept. 26, 1907
		South Versailles Water Co.,	North Versailles Twp., Allegheny County	Purchased,	June 24, 1902
Elizabeth Water Co., The Elizabeth Water Co. was sold to the Monongahela Valley Water Co. on Feb. 1, 1898. (See Monongahela Valley Water Co.)	Elizabeth Boro., Allegheny County	West Elizabeth Water Co.,	West Elizabeth Boro., Allegheny County	Purchased,	Jan. 23, 1896

Fayette City Water Co.,	Merger, Fayette Co.,	Fayette City Water Co.,	Fayette City Boro., Fayette County	Merged,	Jan. 5, 1906
		Washington Twp. Water Co.	Washington Twp., Fayette County	Merged,	Jan. 5, 1906
Florin Water Co.,	Merger, Lancaster County,	Florin Water Co.,	Mt. Joy, Lancaster County,	Merged,	Jan. 20, 1915
		E. Donegal Twp. Water Co.	East Donegal Twp., Lancaster County	Merged,	Jan. 20, 1915
Galeton-Eldred Water Co.,	Galeton village, Potter County	Eldred Water Co.,	Eldred Boro., McKean County	Purchased,	July 18, 1906
Greenmont Water Supply Co.,	Henderson Twp., Huntingdon County	Arydale Water Supply Co.,	Brady Twp., Huntingdon County	Purchased,	Sept. 5, 1905
		Calvin Water Supply Co.,	Union Twp., Huntingdon County	Purchased,	Sept. 5, 1905
		Longfellow Water Supply Co.	Bratton Twp., Mifflin County	Purchased,	Sept. 5, 1905
		Ryde Water Supply Co.,	Wayne Twp., Mifflin County	Purchased,	Sept. 5, 1905
		Strode Water Supply Co.,	Granville Twp., Mifflin County	Purchased,	Sept. 5, 1905
		Valley Point Water Supply Co.	Shirley Twp., Huntingdon County	Purchased,	Sept. 5, 1905
Greensburg Water Co.,	Greensburg Boro., Westmoreland County	Hempfield Twp. Water Co.,	Hempfield Twp., Westmoreland County	Purchased,	Mar. 4, 1885
		Ludwick Water Co.,	Ludwick Boro., Westmoreland County	Purchased,	Mar. 4, 1885
		Unity Twp. Water Co.,	Unity Twp., Westmoreland County	Purchased,	Mar. 4, 1885
Hanover & McSherrystown Water Co.,	Hanover Boro., York County	Hanover Water Co.,	Hanover Boro., York County	Purchased,	April 6, 1896
		McSherrystown Water Co.,	McSherrystown Boro., Adams County	Purchased,	May 21, 1905
Harmony Water Co.,	Harmony Twp., Beaver County	Ambridge Water Co. (dissolved 1914)	Harmony Twp., Beaver County	Purchased,	Jan. 7, 1910
High Ridge Water Supply Co.,	St. Clair Twp., Westmoreland County	Connellsville Water Supply Co.	Connellsville Twp., Fayette County	Purchased,	Sept. 23, 1905
		Quarry Water Co.,	St. Clair Twp., Westmoreland County	Purchased,	April 10, 1907

TABLE NO. 18—Continued

Holding company		Constituent companies			
Name	Incorporated for	Name	Incorporated for	Form of consolidation	Date of consolidation
Honesdale Consolidated Water Co.,	Merger, Wayne and Pike Counties	Consumers Water Co. of Honesdale	Honesdale Boro., Wayne County	Merged,	Feb. 10, 1905
		Honesdale Water Co.,	Honesdale Boro., Wayne County	Merged,	Feb. 10, 1905
		Wayne Citizens Water & Supply Co.	Wayne and Pike Counties,	Merged,	Feb. 10, 1905
Hughesville Home Water Co.,	Hughesville Boro., Lycoming County	Hughesville Water Co.,	Hughesville Boro., Lycoming County	Purchased	Dec. 27, 1904,
Jermyn & Rush Brook Water Co.,	Merger, Lackawanna County	Jermyn Water Co.,	Jermyn Boro., Lackawanna County	Merged,	Oct. 16, 1894
		Rush Brook Water Co.,	Jermyn Boro., Lackawanna County	Merged,	Oct. 16, 1894
Johnstown Water Co.,	Johnstown and vicinity, Cambria County	Stony Creek Water Co.,	Moxham, Cambria County,	Purchased,	May 1, 1890
Juniata Water & Water Power Co.,	Smithfield Twp., Huntingdon County	Alexandria Water & Water Power Co.	Porter Twp., Huntingdon County	Purchased,	July 12, 1906
		Little Juniata Water & Power Co.	Logan Twp., Huntingdon County.	Purchased,	July 12, 1906
Kensington Water Co.,	Lower Burrell Twp., Westmoreland County	Parnassus Water Co.,	Parnassus Boro., Westmoreland County	Purchased,	Jan. 10, 1893
Latrobe Water Co.,	Latrobe Boro., Westmoreland County	Derry Twp. Water Co.,	Derry Twp., Westmoreland County	Purchased,	April 8, 1885
Lebanon Valley Consolidated Water Supply Co.	Merger, Lebanon County,	Hebron Water Co.,	South Lebanon Twp., Lebanon County	Merged,	Aug. 11, 1903
		Weavertown Water Co.,	North Lebanon Twp., Lebanon County	Merged,	Aug. 11, 1903

Lebanon Valley Consolidated Water Supply Co.	Lebanon County,	N. Annville Water Supply Co.	North Annville Twp., Lebanon County	Purchased,	April 22, 1915
		N. Cornwall Water Supply Co.	North Cornwall Twp., Lebanon County	Purchased,	April 22, 1915
		S. Annville Water Supply Co.	South Annville Twp., Lebanon County	Purchased,	April 22, 1915
		Jonestown Water Supply Co.	Jonestown Boro., Lebanon County	Purchased,	April 22, 1915
Lebanon Valley Consolidated Water Supply Co.	Lebanon County,	Gravel Hill Water Co.,	North Londonderry Twp., Lebanon County	Purchased,	April 22, 1915
Lewistown-Reedsville Water Co.,	Merger, Mifflin County,	Citizens Water Co. of Lewistown	Lewistown Boro., Mifflin County	Merged,	June 3, 1908
		Granville Water Co.,	Granville Twp., Mifflin County	Merged,	June 3, 1908
		Lewistown Water Co.,	Lewistown Boro., Mifflin County	Merged,	June 3, 1908
		Minehart Run Water Co.,	Derry Twp., Mifflin County,	Merged,	June 3, 1908
		Reedsville Water Co.,	Armagh, Brown and Derry Twps., Mifflin County	Merged,	June 3, 1908
Logans Valley Water Co.,	Antis Twp., Blair County,	Bellwood Water Co.,	Bellwood Boro., Blair County	Purchased,	July 12, 1897
McCall Ferry Power Co.,	Merger, Lancaster and York Counties	Hillside Water & Power Co.,	Lower Chanceford Twp., York County	Merged,	April 11, 1905
		Susquehanna Water & Power Co.	Martic Twp., Lancaster County	Merged,	April 11, 1905
Middletown & Swatara Consolidated Water Co.	Merger, Dauphin County,	Londonderry Water Co.,	Royalton Boro., Dauphin County	Merged,	Nov. 5, 1903
		Middletown & Swatara Water Co.	Middletown Boro., Dauphin County	Merged,	Nov. 5, 1903
Monessen Water Co.,	Rostraver Twp., Westmoreland County	Charleroi Water Co.,	Fallowfield Twp., Washington County	Purchased,	Aug. 22, 1912
		Donora Water Co.,	Carroll Twp., Washington County	Purchased,	Aug. 22, 1912
Monongahela Valley Water Co.,	Allegheny County,	Elizabeth Water Co.,	Elizabeth Boro., Allegheny County	Purchased,	Feb. 1, 1898
		Jefferson & Mifflin Water Co.	Baldwin, Snowden and Union Twps., Allegheny County	Purchased,	Feb. 1, 1898
		Lincoln Water Co.,	Allegheny County,	Purchased,	Feb. 1, 1898

TABLE NO. 18—Continued

Holding company		Constituent companies			
Name	Incorporated for	Name	Incorporated for	Form of consolidation	Date of consolidation
Monongahela Water Co.,	Birmingham, East Birmingham and South Pittsburgh, Allegheny County	Borough of Chartiers Water Co.	Chartiers Boro., Allegheny County	Purchased,	Aug. 14, 1894
		Mansfield Boro. Water Co.,	Mansfield Boro., Allegheny County	Purchased,	Aug. 14, 1894
		Manufacturers Water Co. of Pittsburgh	City of Pittsburgh, south of Monongahela River, Allegheny County	Purchased,	Oct. 1, 1888
		Neville Twp. Water Co.,	Neville Twp., Allegheny County	Purchased,	July 2, 1903
		Robinson Twp. Water Co.,	Robinson Twp., Allegheny County	Purchased,	Aug. 14, 1894
		Scott Twp. Water Co.,	Scott Twp., Allegheny County	Purchased,	Aug. 14, 1894
		South View Water Co.,	Baldwin Twp., Allegheny County	Purchased,	Sept. 4, 1891
		Stowe Twp. Water Co.,	Stowe Twp., Allegheny County	Purchased,	April 16, 1890
Moreland Spring Water Co.,	Moreland Twp., Montgomery County	Weldon Water Co.,	Abington Twp., Montgomery County	Purchased,	Nov. 10, 1909
		Ogontz Water Co.,	Cheltenham Twp., Montgomery County	Purchased,	Nov. 10, 1909
Mountain Water Co.,	Milton Boro., Turbet and West Chillisquaque Twps. Northumberland County	Milton Water Co.,	Milton Boro., Northumberland County	Purchased,	Dec. 9, 1901
Muncy Water Supply Co.,	Muncy Boro., Lycoming County	Muncy Water Co.,	Muncy Boro., Lycoming County	Purchased,	Mar. 1898
Nekoda Water Supply Co.,	Greenwood Twp., Perry County	Acker Water Supply Co.,	Howe Twp., Perry County,	Purchased,	Sept. 5, 1905
		Iroquois Water Supply Co.,	Miller Twp., Perry County,	Purchased,	Sept. 5, 1905
		Marsh Run Water Supply Co.	Tuscarora Twp., Perry County	Purchased,	Sept. 5, 1905

		Oliver Water Supply Co.,	Oliver Twp., Perry County,	Purchased,	Sept. 5, 1905
		Wheatfield Water Supply Co.	Wheatfield Twp., Perry County	Purchased,	Sept. 5, 1905
Nesquehoning Water Supply Co., The Nesquehoning Water Supply Co. was sold back to the Panther Valley Water Co. on May 3, 1907. (See Panther Valley Water Co.)	Carbon and Schuylkill Counties	Panther Valley Water Co.,	Lansford Boro., Carbon County	Purchased,	June 18, 1900
New Chester Water Co.,	Chester City, Delaware County	Eddystone Water Co.,	Ridley Twp., Delaware County	Purchased,	Nov. 7, 1906
		Linwood Water Co.,	Lower, Chichester Twp., Delaware County	Purchased,	Nov. 19, 1906
		South Chester Water Co.,	South Chester Boro., Delaware County	Purchased,	Nov. 19, 1906
North Springfield Water Co.,	Springfield Twp., Montgomery County	Berwyn Water Co.,	Easttown Twp., Chester County	Purchased,	Oct. 13, 1899
		Citizens Water Co. of White Marsh Twp.	Whitemarsh Twp., Montgomery County	Purchased,	June 24, 1898
		Consumers Water Co. of Plymouth Twp.	Plymouth Twp., Montgomery County	Purchased,	June 24, 1898
		Dewey Water Co.,	Upper Merion Twp., Montgomery County	Purchased,	June 24, 1898
		Glenside Water Co.,	Glenside, Edge Hill and Weldon villages, Montgomery County	Purchased,	July 20, 1899
		Moreland Water Co.,	Moreland Twp., Montgomery County	Purchased,	June 24, 1898
		Oak Lane Water Co.,	Cheltenham Twp., Montgomery County	Purchased,	Oct. 27, 1899
		Peoples Water Co. of Abington Twp.	Abington Twp., Montgomery County	Purchased,	June 24, 1898
		Upper Dublin Water Co.,	Upper Dublin Twp., Montgomery County	Purchased,	June 24, 1898
		Wayne Water Works Co.,	Radnor Twp., Delaware County	Purchased,	Jan. 12, 1904
North Strabane Water Co.,	North Strabane Twp., Washington County	Cecil Water Co.,	Cecil Twp., Washington County	Purchased,	Oct. 11, 1901
		Chartiers Twp. Water Co.,	Chartiers Twp., Washington County	Purchased,	Oct. 11, 1901
Northern Cambria Water Co.,	Merger, Susquehanna Twp. and Spangler Village, Cambria County	Northern Cambria Water Co.	Susquehanna Twp., Cambria County	Merged,	April 5, 1913
		The Spangler Water Co.,	Spangler Village, Cambria County	Merged,	April 5, 1913

TABLE NO. 18—Continued

Holding company		Constituent companies			
Name	Incorporated for	Name	Incorporated for	Form of consolidation	Date of consolidation
The Northern Cambria Water Co.,	Merger, Cambria County,	Northern Cambria Water Co.	Susquehanna Twp., Cambria County	Merged,	April 5, 1913
		Barnesboro Water Co.,	Barnesboro, Cambria County	Merged,	April 5, 1913
Octoraro Water Co.,	Merger, Chester and Lancaster Counties	Caln Water Co.,	Caln Twp., Chester County,	Merged,	July 13, 1903
		Citizens Water Co. of West Sadsbury	West Sadsbury Twp., Chester County	Merged,	July 13, 1903
		Colerain Water Co.,	Colerain Twp., Lancaster County	Merged,	July 13, 1903
		Conestoga Water Co.,	Conestoga Twp., Lancaster County	Merged,	July 13, 1903
		Lower Oxford Water Co.,	Lower Oxford Twp., Chester County	Merged,	July 13, 1903
		Peoples Water Co. of Sadsbury, Pa.	Sadsbury Twp., Chester County	Merged,	July 13, 1903
		Providence Water Co.,	Providence Twp., Lancaster County	Merged,	July 13, 1903
Ohio Valley Water Co.,	McKees Rocks Boro., Allegheny County	Arizona Water Co.,	Emsworth Boro., Allegheny County	Purchased,	July 26, 1904
		Benwood Water Co.,	Stowe Twp., Allegheny County	Purchased,	June 28, 1904
		Colorado Water Co.,	Ben Avon Boro., Allegheny County	Purchased,	July 26, 1904
		Idaho Water Co.,	Bellevue Boro., Allegheny County	Purchased,	July 26, 1904
		Perrysville Water Co.,	Ross Twp., Allegheny County	Purchased,	Sept. 22, 1904
		Valley Consolidated Water Co.	Allegheny County,	Purchased,	Aug. 5, 1904
		Vermont Water Co.,	Avalon Boro., Allegheny County	Purchased,	July 26, 1904
Panther Valley Water Co.,	Lansford Boro., Carbon County	Mauch Chunk Twp. Water Co.	Mauch Chunk Twp., Carbon County	Purchased,	May 3, 1907

		Nesquehoning Water Co., --	Nesquehoning, Coaldale and Ashton, Carbon County	Purchased,---	May 3, 1907
		Nesquehoning Water Supply Co.	Schuylkill and Carbon Counties	Purchased,---	May 3, 1907
		Rahn Twp. Water Co., ----	Rahn Twp., Schuylkill County	Purchased,---	May 3, 1907
Perkasie Water Supply Co., ----------	Perkasie Boro., Bucks County	Perkasie Water Co., -------	Perkasie Boro., Bucks County	Purchased,---	June 5, 1902
Pennsylvania Power Co., ----------	Lawrence County, ----------	Ellwood Power Co., --------	rence County		
Pennsylvania Water Co., ----------	Merger, Allegheny County,	Artesian Water Co. of Wilkinsburg	Wilkinsburg Boro., Allegheny County	Merged,------	May 26, 1902
		Citizens Water Co., --------	Braddock Twp., Allegheny County	Merged,------	May 26, 1902
		East Pittsburgh Water Co.,	North Versailles Twp., Allegheny County	Merged,------	May 26, 1902
		Manufacturers Water Co.,--	Patton Twp., Allegheny County	Merged,------	May 26, 1902
		Pennsylvania Water Co., --	Sterrett Twp., Allegheny County	Merged,------	May 26, 1902
		Peoples Water Supply Co.,	Wilkins Twp., Allegheny County	Merged,------	May 26, 1902
		Rural Water Co., ----------	Wilkins Twp., Allegheny County	Merged,------	May 26, 1902
		Valley Water Co., ----------	Penn Twp., Allegheny County	Merged,------	May 26, 1902
Pennsylvania Water Co., ---------- The Pennsylvania Water Co. was merged into the Pennsylvania Water Co. on May 26, 1902. (See Pennsylvania Water Co.)	Sterrett Twp., Allegheny County	Penn Water Co., ----------	Braddock Twp., Allegheny County	Purchased,---	Aug. 16, 1888
			Ellwood City Boro., Law-	Purchased,---	Dec. 9, 1904
Reedsville Water Co., ----------	Armagh, Brown and Derry Twps., Mifflin County	Burnham Water Co., ------	Derry Twp., Mifflin County,	Purchased,---	Oct. 17, 1900
		Logan Spring Water Co., --	Brown Twp., Mifflin County	Purchased,---	Oct. 17, 1900
		Milroy Water Co., ---------	Armagh Twp., Mifflin County	Purchased,---	Oct. 17, 1900
Riverton Consolidated Water Co., ----	Merger, Cumberland and York Counties	Allen Spring Water Co., ---	Allen Twp., Cumberland County	Merged,------	Feb. 17, 1904
		East Pennsboro Water Co.,	East Pennsboro Twp., Cumberland County	Merged,------	Feb. 17, 1904
		Fairview Twp. Water Co.,--	Fairview Twp., York County	Merged,------	Feb. 17, 1904
		Mountain Water Co., ------	New Cumberland Boro., Cumberland County	Merged,------	Feb. 17, 1904

TABLE NO. 18—Continued

Holding company		Constituent companies			
Name	Incorporated for	Name	Incorporated for	Form of consolidation	Date of consolidation
Riverton Consolidated Water Co.—Continued.		Riverton Water Co.,	Riverton, Cumberland County	Merged,	Feb. 17, 1904
		Susquehanna Water Supply Co.	Camp Hill Boro., Cumberland County	Merged,	Feb. 17, 1904
Safe Harbor Water & Power Co.,	Merger, Lancaster County,	Millstone Water & Power Co.	Conestoga Twp., Lancaster County	Merged,	Sept. 15, 1904
		Rural Water & Power Co.,	Manor Twp., Lancaster County	Merged,	Sept. 15, 1904
Saint Clair Water Co.,	Lower Saint Clair Twp., Allegheny County	Beltzhoover Water Co.,	Beltzhoover Boro., Allegheny County	Purchased,	Mar. 15, 1893
		Knoxville Water Co.,	Knoxville Boro., Allegheny County	Purchased,	Mar. 15, 1893
		Lebanon Water Co.,	Mansfield Boro., Allegheny County	Purchased,	Mar. 15, 1893
		Putman Water Co.,	Chartiers Boro., Allegheny County	Purchased,	Mar. 15, 1893
Scranton Gas & Water Co.,	Providence Twp., Luzerne County	Meadow Brook Water Co.,	Scranton City, Lackawanna County	Purchased,	May 1, 1900
		Providence Gas & Water Co.	Special Act,	Purchased,	May 1, 1900
Shamokin Dam Water Co.,	Monroe Twp., Snyder County	Hartley Twp. Water Supply Co. of Hartley Twp., Union Co., Pa.	Hartley Twp., Union County	Purchased,	April 4, 1907
		Hartley Water Co. of Hartley Twp., Union Co., Pa.	Hartley Twp., Union County	Purchased,	April 4, 1907
South Chester Water Co., The South Chester Water Co. was sold to New Chester Water Co. on Nov. 19, 1906. (See New Chester Water Co.)	South Chester Boro., Delaware County	Penn Water Co.,	No. Chester Boro., Delaware County	Purchased,	Mar. 21, 1887
		Upland Water Co.,	Upland Boro., Delaware County	Purchased,	Mar. 21, 1887

Springfield Water Co.,	Springfield Twp., Delaware County	Bryn Mawr Water Co.,	Lower Merion Twp., Montgomery County	Purchased,	Aug. 26, 1896
		Citizens Water Co. of Darby Boro.	Darby Boro., Delaware County	Purchased,	June 15, 1892
		Citizens Water Co. of Haverford Twp.	Haverford Twp., Delaware County	Purchased,	Oct. 30, 1901
		Clifton Heights Water Co.,	Clifton Heights Boro., Delaware County	Purchased,	Aug. 13, 1896
		Collingdale Water Co.,	Collingdale Boro., Delaware County	Purchased,	Oct. 18, 1900
		Consumers Water Co. of Marple Twp.	Marple Twp., Delaware County	Purchased,	Oct. 30, 1901
		Consumers Water Co. of Upper Darby	Upper Darby Twp., Delaware County	Purchased,	June 15, 1892
		Highland Water Co. of Ridley Twp.	Ridley Twp., Delaware County	Purchased,	June 15, 1892
		Lansdowne Water Co.,	Lansdowne, Delaware County	Purchased,	June 14, 1899
		Penn Water Co. of Sharon Hill Boro.	Sharon Hill Boro., Delaware County	Purchased,	June 15, 1892
		Peoples Water Co. of Darby Twp.	Darby Twp., Delaware County	Purchased,	June 15, 1892
		Peoples Water Co. of Delaware County	Haverford Twp., Delaware County	Purchased,	Jan. 12, 1904
		Ridley Park Cold Spring Water Co. of Ridley Park	Ridley Park Boro., Delaware County	Purchased,	June 21, 1892
		Tinicum Water Co.	Tinicum Twp., Delaware County	Purchased,	June 15, 1892
Summit Water Supply Co.,	Lilly Boro., Cambria County	Allegheny Mountain Water Co.	Lilly Boro., Washington and Gallitzin Twps., Cambria County	Purchased,	Aug. 30, 1905
		Beaverdale Water Co.,	Adams and Summerhill Twps., Cambria County	Purchased,	Aug. 30, 1905
		Cassandra Water Supply Co.	Washington Twp., Cambria County	Purchased,	Aug. 26, 1905
		Croyle Water Supply Co.,	Croyle Twp., Cambria County	Purchased,	Aug. 26, 1905
		Dawson Water Supply Co.,	Gallitzin Twp., Cambria County	Purchased,	Aug. 26, 1905
		Dean Water Supply Co.,	Dean Twp., Cambria County	Purchased,	Oct. 3, 1905
		Gwendolen Water Co.,	Cambria Twp., Cambria County	Purchased,	April 4, 1907
		Industrial Water Supply Co.	Adams Twp., Cambria County	Purchased,	Oct. 3, 1905
		Luckett Water Supply Co.,	Cresson Twp., Cambria County	Purchased,	Aug. 26, 1905

TABLE NO. 18—Continued

Holding company		Constituent companies			
Name	Incorporated for	Name	Incorporated for	Form of consolidation	Date of consolidation
Summit Water Supply Co.—Continued.	Lilly Boro., Cambria County—Continued.	Mountain Crest Water Co.,	Cresson Twp., Cambria County	Purchased,	Oct. 3, 1905
		Munster Water Supply Co.,	Washington Twp., Cambria County	Purchased,	Oct. 3, 1905
		Onnalinda Water Co.,	Onnalinda village, Cambria County	Purchased,	Aug. 17, 1905
		Otter Water Supply Co.,	Adams Twp., Cambria County	Purchased,	Aug. 26, 1905
		Sonman Water Supply Co.,	Portage Twp., Cambria County	Purchased,	Aug. 26, 1905
		Summerhill Water Supply Co.	Summerhill Twp., Cambria County	Purchased,	Aug. 26, 1905
Susquehanna Falls Power Co.,	Merger, Lancaster and York Counties	Muddy Creek Water & Power Co.	Lower Chanceford Twp., York County	Merged,	Aug. 14, 1902
		Pequa Water and Power Co.	Martic Twp., Lancaster County	Merged,	Aug. 14, 1902
Susquehanna River Power Co.,	Merger, Lancaster and York Counties	Drumore Water and Power Co.	Drumore Twp., Lancaster County	Merged,	Aug. 14, 1902
		Fulton Water and Power Co.	Fulton Twp., Lancaster County	Merged,	Aug. 14, 1902
		Peachbottom Water and Power Co.	Peachbottom Twp., York County	Merged,	Aug. 14, 1902
Susquehanna Storage, Lake & Power Co.	Merger, Lancaster and York Counties	Chanceford Water and Power Co.	Chanceford Twp., York County	Merged,	Aug. 14, 1902
		Conestoga Water and Power Co.	Conestoga Twp., Lancaster County	Merged,	Aug. 14, 1902
		Lower Windsor Water and Power Co.	Lower Windsor Twp., York County	Merged,	Aug. 14, 1902
		Manor Water and Power Co.	Manor Twp., Lancaster County	Merged,	Aug. 14, 1902

Tarentum Water Co., ---------- The Tarentum Water Co. was sold on Aug. 13, 1906, to Allegheny Valley Water Co. (See Allegheny Valley Water Co.)	Merger, Allegheny County,	East Deer Twp. Water Co.,	East Deer Twp., Allegheny County	Merged,------	May 30, 1906
		Harrison Twp. Water Co.,	Harrison Twp., Allegheny County	Merged,------	May 30, 1906
		Tarentum Water Co., ------	Tarentum Boro., Allegheny County	Merged,------	May 30, 1906
The Telford Water Co., ----------	Merger, Montgomery and Bucks Counties	Telford Water Co., --------	West Telford Boro., Montgomery County	Merged,------	Sept. 12, 1911
		Reliance Water Co., --------	Franconia Twp., Montgomery County	Merged,------	Sept. 12, 1911
		Rockhill Water Co., --------	Telford Boro., Bucks County	Merged,------	Sept. 12, 1911
		Hilltown Water Co., -------	Hilltown Twp., Bucks County	Merged,------	Sept. 12, 1911
Tipton Water Co., ----------	Antis Twp., Blair County,	Merivale Water Supply Co.,	Logan Twp., Blair County,	Purchased,---	June 5, 1905
Trafford Water Co., ----------	Merger, Allegheny and Westmoreland Counties	Brinton Water Co., --------	Penn Twp., Westmoreland County	Merged,------	Jan. 14, 1902
		Gallatin Water Co., --------	North Versailles Twp., Allegheny County	Merged,------	Jan. 14, 1902
		Grant Water Co., ----------	East Pittsburg Boro., Allegheny County	Merged,------	Jan. 14, 1902
		Madison Water Co., --------	Turtle Creek Boro., Allegheny County	Merged,------	Jan. 14, 1902
		Pitcairn Water Co., --------	Pitcairn Boro., Allegheny County	Merged,------	Jan. 14, 1902
		Stewart Water Co., --------	North Huntingdon Twp., Westmoreland County	Merged,------	Jan. 14, 1902
		Trafford Water Co., -------	Patton Twp., Allegheny County	Merged,------	Jan. 14, 1902
		Wilmerding Water Co., ----	Wilmerding Boro., Allegheny County	Merged,------	Jan. 14, 1902
Trotter Water Co., ----------	Merger, Fayette and Westmoreland Counties	Trotter Water Co., --------	Dunbar Twp., Fayette County	Merged,------	Sept. 14, 1905
		Youghgahela Water Co., --	Merger, Fayette County,----	Merged,------	Sept. 14, 1905
		Youghiogheny Water Co.,--	Fayette and Westmoreland Counties	Merged,------	Sept. 14, 1905
Trout Run Water Supply Co., ---------	Brady Twp., Huntingdon County	Barrie Water Supply Co., --	Porter Twp., Huntingdon County	Purchased,---	Aug. 30, 1905
		Whitehall Water Supply Co.	Franklin Twp., Huntingdon County	Purchased,---	Aug. 30, 1905
		Union Water Supply Co. of Oneida Twp.	Oneida Twp., Huntingdon County	Purchased,---	Aug. 30, 1905
Tyrone Gas & Water Co., ----------	Tyrone Boro., Blair County	East Tyrone Water Co., --	East Tyrone Boro., Blair County	Purchased,---	Dec. 19, 1896

TABLE NO. 18—Continued

Holding company		Constituent companies			
Name	Incorporated for	Name	Incorporated for	Form of consolidation	Date of consolidation
Union Water Co.,	Beaver Falls Boro., Beaver County	Valley Water Co.,	Rochester Boro., Beaver County	Purchased,	Dec. 30, 1892
Valley Consolidated Water Co., The Valley Consolidated Water Co. was sold to the Ohio Valley Water Co. on Aug. 5, 1904. (See Ohio Valley Water Co.)	Allegheny County,	Bellevue Water Co.,	Bellevue Boro., Allegheny County	Purchased,	Nov. 7, 1897
		Riverview Water Co.,	Avalon Boro., Allegheny County	Purchased,	Nov. 7, 1897
Valley Water Co., The Valley Water Co. was sold to the Union Water Co. on Dec. 30, 1892. (See Union Water Co.)	Rochester Boro., Beaver County	Freedom Water Co.,	Freedom Boro., Beaver County	Purchased,	Sept. 24, 1890
		Philipsburg Water Co.,	Philipsburg Boro., Beaver County	Purchased,	Sept. 24, 1890
		Pulaski Water Co.,	Pulaski Twp., Beaver County	Purchased,	Sept. 24, 1890
		West Side Water Co.,	Bridgewater Boro., Beaver County	Purchased,	Sept. 24, 1890
Western Water Supply Co., The Western Water Supply Co. was merged into another Western Water Supply Co. on Sept. 23, 1902. (See below.)	Merger, Fayette and Westmoreland Counties	Southern Water Supply Co.,	Springfield Twp., Fayette County	Merged,	June 24, 1902
		Southwestern Water Supply Co.	Springfield Twp., Fayette County	Merged,	June 24, 1902
		Western Water Supply Co.,	Westmoreland County,	Merged,	June 24, 1902
Western Water Supply Co.,	Merger, Fayette, Somerset and Westmoreland Counties	Laurel Hill Water Supply Co.	Upper Turkeyfoot Twp., Somerset County	Merged,	Sept. 23, 1902
		Turkeyfoot Water Supply Co.	Upper Turkeyfoot Twp., Somerset County	Merged,	Sept. 23, 1902
		Westmoreland Water Supply Co.	Merger, Fayette and Westmoreland Counties	Merged,	Sept. 23, 1902
		Western Water Co.,	Westmoreland County,	Purchased,	Dec. 26, 1905
The Westmoreland Water Co.,	Ludwick Boro., Westmoreland County	The Westmoreland Water Co. of Unity Twp.	Unity Twp., Westmoreland County	Purchased,	Dec. 30, 1913
		The Westmoreland Water Co. of Hempfield Twp.	Hempfield Twp., Westmoreland County	Purchased,	Dec. 30, 1913

		The Westmoreland Water Co. of Greensburg	Greensburg Boro., Westmoreland County	Purchased,	Dec. 30, 1913
		The Penn Twp. Water Co.,	Penn Twp., Westmoreland County	Purchased,	Dec. 30, 1913
		The Penn Borough Water Co.	Penn Boro., Westmoreland County	Purchased,	Dec. 30, 1913
		The Derry Water Co.,	Derry Boro., Westmoreland County	Purchased,	Dec. 30, 1913
		The Irwin Water Co.,	Irwin Boro., Westmoreland County	Purchased,	Dec. 30, 1913
The Williamsport Water Co.,	Merger, Lycoming County,	The Citizens Water and Gas Co. of Williamsport	Williamsport, Newberry and Jaysburg, Lycoming County	Merged,	Jan. 12, 1912
		Williamsport Water Co.,	Williamsport, Lycoming County	Merged,	Jan. 12, 1912
Womelsdorf Consolidated Water Co.,	Merger, Berks County,	Robesonia Water Co.,	County		
		Womelsdorf Water Co.,	Womelsdorf Boro., Berks County	Merged,	Dec. 5, 1904
York County Consolidated Water Co.,	Merger, York County,	Dallastown Water Co.,	Dallastown Boro., York County	Merged,	April 1, 1909
		Phoenix Water Co.,	Windsor Boro., York County	Merged,	April 1, 1909
		Yoe Water Co.,	Yoe Boro., York County,	Merged,	April 1, 1909
			Robesonia village, Berks	Marged,	Dec. 5, 1904
York Water Co.,	York, York County,	Meyersville Water Co.,	Manchester Twp., York County	Purchased,	April 23, 1897
		Water Co. of Manchester Twp.	Manchester Twp., York County	Purchased,	Feb. 15, 1897
		Water Co. of Spring Garden Twp.	Spring Garden Twp., York County	Purchased,	Feb. 15, 1897
		Water Co. of West Manchester Twp.	West Manchester Twp., York County	Purchased,	Feb. 15, 1897
Youghgahela Water Co., The Youghgahela Water Co. was merged into the Trotter Water Co. on Sept. 14, 1905. (See Trotter Water Co.)	Merger, Fayette County,	Fairchance Water Co.,	George Twp., Fayette County	Merged,	July 11, 1905
		Huron Water Co.,	German Twp., Fayette, County	Merged,	July 11, 1905
		Lemont Water Co.,	North Union Twp., Fayette County	Merged,	July 11, 1905
		Redstone Water Co.,	South Union Twp., Fayette County	Merged,	July 11, 1905